

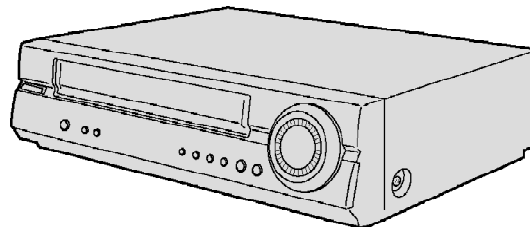
ORDER NO. VRD0206026C8

Service Manual

Video Cassette Recorder

Panasonic **VHS**
PAL NTSC

NV-SJ30AM / NV-SJ30EU / NV-SJ30PMP / NV-SJ50AM / NV-SJ50AU / NV-SJ50EU
R4-MECHANISM



SPECIFICATIONS

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ITEM			SPECIFICATION			
POWER	SOURCE: 110-240V AC 50/60 Hz		TAPE SPEED	SP: 23.39 mm/s (PAL), 33.3 mm/s (NTSC)		
	CONSUMPTION: 9 watts (NV-SJ30AM/PMP, SJ50AM) 8 watts (NV-SJ30EU, SJ50AU/EU)			LP: 11.695 mm/s (PAL) EP: 7.796 mm/s (PAL), 11.1 mm/s (NTSC)		
RECORDING SYSTEM	2 rotary heads, helical scanning system PAL/ NTSC			Record/Playback Time (PAL): SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape EP: 12 hours with 240 min. type tape FF/REW Time: 60 sec. with 180 min. type tape JET REW Time: 43 sec. with 180 min. type tape		
RF OUT SYSTEM	NV-SJ30AM /EU/PMP			OPERATING TEMPERATURE	5°C - 40°C	
	NV-SJ50AM /AU/EU	UI IF: CH30 $\pm \frac{2}{3}$ (CCIR) 71 $\pm$ 3 dB μ , 75 Ω closed			OPERATING HUMIDITY 35% - 80%	
VIDEO	NV-SJ30AM /EU/PMP	HEADS: 2 rotary heads 1 pair for recording and playback (L-R heads)	DIMENSIONS	320 (W) $\times$ 89 (H) $\times$ 278 (D) mm		
	NV-SJ50AM /AU/EU	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L'-R' heads)	WEIGHT	3 kg		
	INPUT: VIDEO IN Connector (Phono type) 1.0 Vp-p, 75 Ω terminated		STANDARD ACCESSORIES	1 pc. Coaxial Cable (NV-SJ50AM/AU/EU) 1 pc. Remote Controller 1 pc. AC Plug Adaptor (NV-SJ30AM: FOR MIDDLE EAST, NV-SJ50AM: FOR MIDDLE EAST AND MALAYSIA)		
	OUTPUT: VIDEO OUT Connector (Phono type) 1.0 Vp-p, 75 Ω terminated					
AUDIO	HEAD: 1 Stationary head (Normal-mono only)					
	INPUT: AUDIO IN Connector (Phono type) -6 dBV (500mV), More than 47 k Ω					
	OUTPUT: AUDIO OUT Connector (Phono type) -6 dBV (500mV), Less than 1k Ω					

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

This service manual contains technical information which will allow service personnel to understand and service this model.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

Note:

1. Adjustment procedures, Disassembly Procedures and Assembly Procedures for Mechanism Chassis are separate volume from this service manual.

**Please refer to the service manual for R4-Mechanism Chassis.
(Order No. VRD0202010C8)**

2. The Model No. is indicated on the Schematic Diagram and Circuit Board Diagrams as follows.

Model No.	Indication Mark
NV-SJ30PMP	(A)
NV-SJ30AM	(B)
NV-SJ30EU	(C)
NV-SJ50AM	(D)
NV-SJ50AU/EU	(E)

2. GENERAL DESCRIPTIONS

2.1. SERVICE CAUTION

2.1.1. REPLACING THE EEPROM IC6002

NOTE:

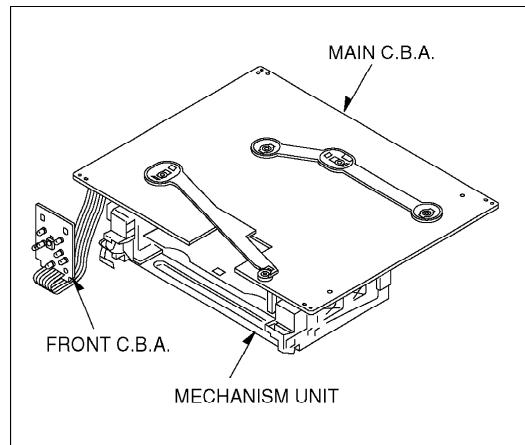
The EEPROM IC6002 store the PG shifter data and the operation setting datas. Therefore after replacing IC6002, PG shifter adjustment should be performed.
(Refer to the Electric Adjustment Procedures)

2.1.2. CHECKING OF MAIN C.B.A.

When servicing the MAIN C.B.A., take out the MAIN C.B.A. and mechanism from the frame and

turn over.

Fig. S1



2.1.3. REMOVAL OF CASSETTE TAPE

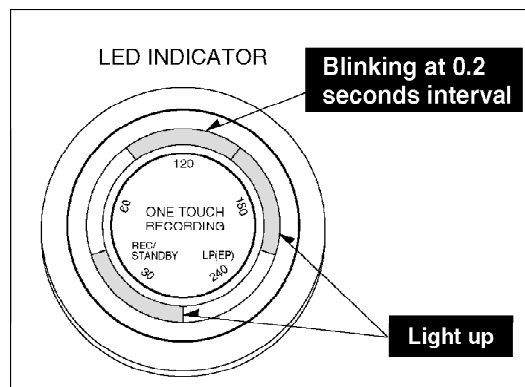
When the cassette tape could not be uninstalled from an electrical malfunction, There are 2 ways to remove a cassette tape.

1. Removal by compulsory unloading.

A. Press FF and EJECT button simultaneously more 3 times to set the Service Mode to 7.

In this Service Mode 7, the LEDs are illuminated as follows.

Fig. S2



B. Press STOP button in order to unload the mechanism. (Pay attention of tape slack)

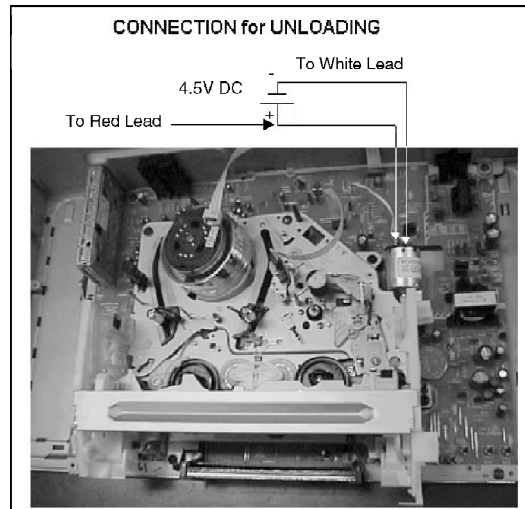
2. Removal by manual operation by rotating the Loading Motor with the batteries.

A. Disconnect the AC plug, and remove the Top Panel and the Front Panel by referring the Disassembly Procedures.

B. Connect three batteries (1.5V spec.) to the Loading Motor in series for supplying 4.5V to rotate the Loading Motor following

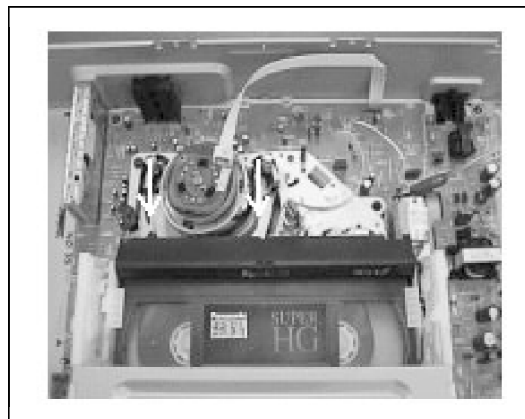
Fig. S3.

Fig. S3



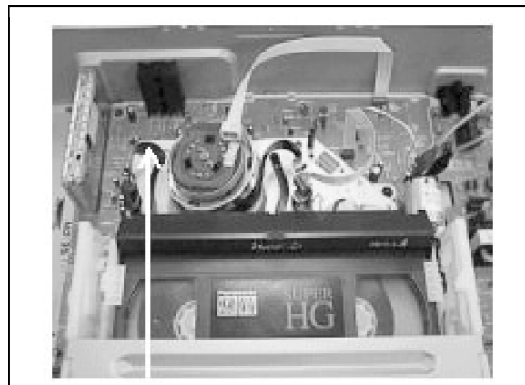
C. Stop unloading just before unloading would be completed as shown in [Fig. S4](#).

Fig. S4



D. Then the tape becomes slack as shown in [Fig. S5](#).

Fig. S5



E. Rotate the S-Reel by a small minus screwdriver ([Fig. S6](#)) to

remove the tape slacks as shown in **Fig. S7**.

Fig. S6

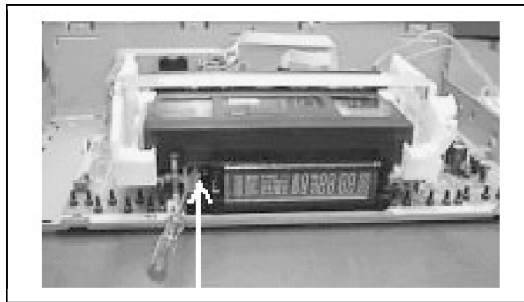
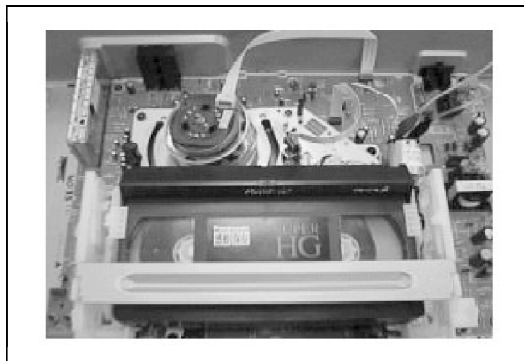
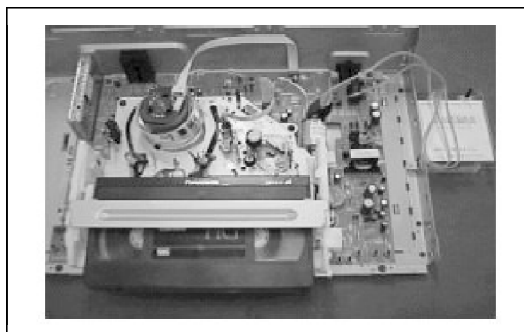


Fig. S7



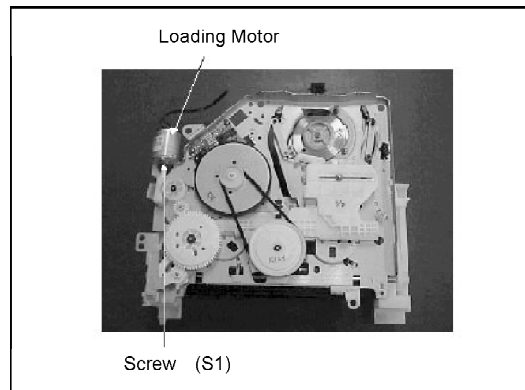
F. Then unload again to remove the cassette tape as shown in **Fig. S8**.

Fig. S8



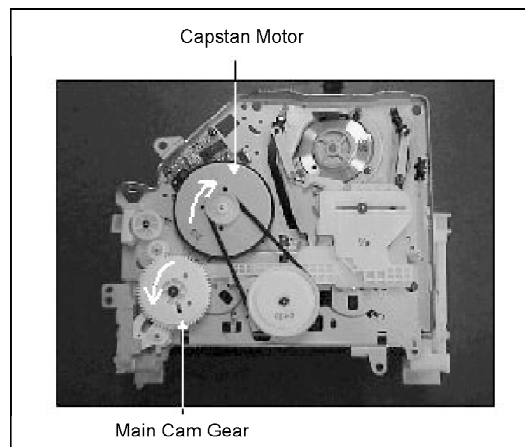
3. Removal by manual operations after uninstalling the mechanism.
 - A. Disconnect the AC plug, and remove the Top Panel, Front Panel and the Mechanism by referring the Disassembly Procedures.
 - B. Remove the Screw (S1) and remove the Loading Motor both shown in **Fig. S9**.

Fig. S9



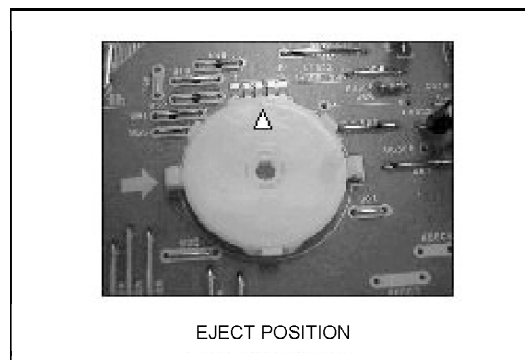
- C. Rotate the Main Cam Gear counter-clockwise (**Fig. S10**) until just before the unloading would be completed as shown in **Fig. S4**.
- D. Rotate the Capstan Motor clockwise (**Fig. S10**) to remove the tape slacks as shown in **Fig. S7**.

Fig. S10



- E. Rotate the Main Cam Gear counter-clockwise again (**Fig. S10**) to remove the cassette-tape as shown in **Fig. S8**.
- F. Set the Position Switch to EJECT POSITION certainly as shown in **Fig. S11**.

Fig. S11



G. Install the Loading Motor and tighten screw (S1) as shown in Fig. S9.

2.1.4. CYLINDER UNIT REPLACEMENT

NOTE:

Replacing only Upper Cylinder unit of R4 Mechanism cannot be performed, as securing of RT gap is impossible out of factory, please replace the cylinder by whole Cylinder Unit. The PG Shifter Adjustment should be performed after replacement of the DD Cylinder Unit.

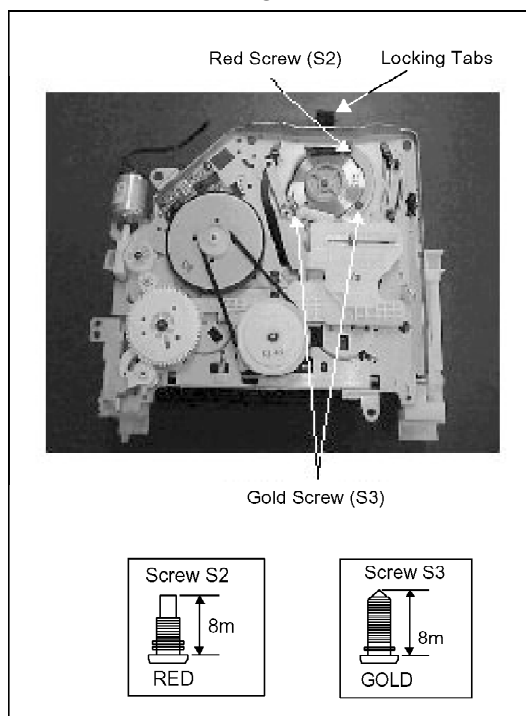
- 1. Remove the Mechanism Unit from Main C.B.A./Chassis by referring "Disassembly Procedure".**
- 2. Unlock 2 locking tabs on a side to release the Cylinder Flexible Card as shown in Fig. S12.**

CAUTION:

Handle the Cylinder Flexible Card with care. When it damaged, you should replace it with a new Cylinder Unit.

- 3. Remove a red Screw (S2) and 2 gold Screws (S3) to remove the Cylinder Unit shown in Fig. S12.**

Fig. S12



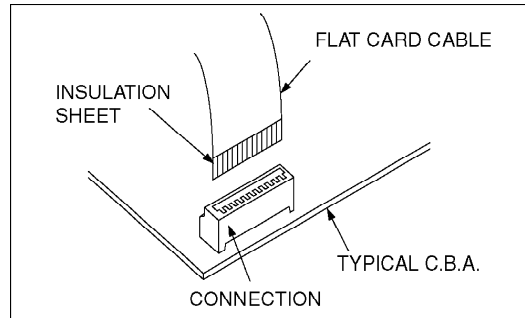
NOTE:

When reassembling, perform the steps in the reverse order, and perform the PG SHIFTER ADJUSTMENT certainly after CYLINDER UNIT REPLACEMENT.

2.1.5. FLAT CARD CABLE INSTALLATION

When installing the Flat Card Cable on the connector, install the Flat Card Cable with the cable contacts facing the connector contacts.

Fig. S13



2.1.6. SERVICE MODE

1. Purpose of Service Mode

This service mode allow the service Technicians to check the VCR mechanism freely without a cassette tape, which enables accessing faulty mechanical part quickly and shortening total repair time.

2. Turning on Service Mode

In the service mode, two types of checking modes are available as follows:

By pressing the FF and EJECT buttons simultaneously for 3 seconds, the service mode 1 will be activated.

- Mode 1:

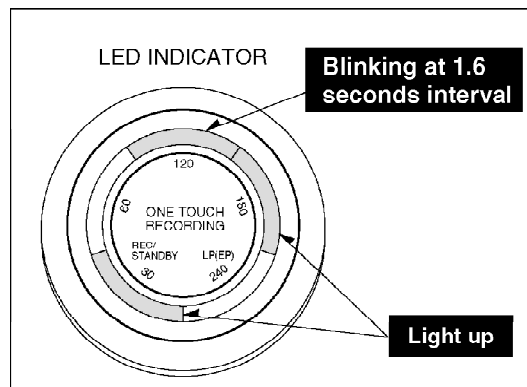
For checking Tape Transport mechanism.

In cassette down condition with cassette tape, the mechanism goes to PLAY, REV, CUE, FF or REW position when the operation button is pressed.

In this mode, LEDs are illuminated as follows:

This service mode 1 is released when pressing the FF and EJECT buttons simultaneously more 4 times.

Fig. S14



By pressing the FF and EJECT buttons simultaneously more 3 times from service mode 1, the service mode 7 will be activated.

- Mode 7:

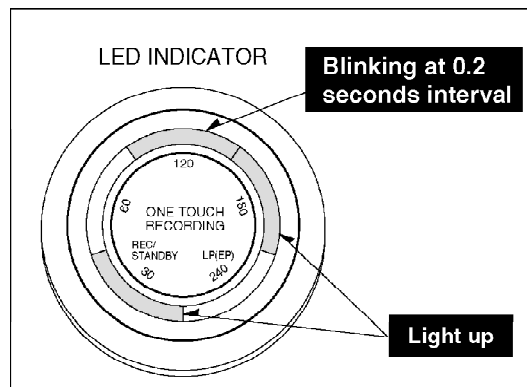
For checking loading/unloading operation.

The loading motor rotates for loading operation when the PLAY button is pressed.

The loading motor rotates for unloading operation when the STOP button is pressed.

In this mode, LEDs are illuminated as follows:

Fig. S15



This service mode 7 is released when pressing the FF and EJECT buttons simultaneously more once.

2.2. SELF-DIAGNOSIS & SERVICE INFORMATION DISPLAY

This model does not have Self-Diagnosis & Service Information Display function.

2.3. INTRODUCTION OF VIDEO HEAD CLEANING CASSETTE / (POLISHING TYPE)

1. We are pleased to introduce Panasonic Video Head Cleaning Cassette, VFK0923FT [for service purposes] and VFK0923FSE [for end users] for all VHS/S-VHS VCP and VCR.

2. These cleaning cassettes are exclusive removing the hard and sticky clogging on video heads.
3. These improve the efficiency of video head cleaning service and shortening cleaning time for end users.

VFK0923FT (For Service usage)	
Type of Cassette	Full VHS Cassette
Cleaning Time	10 Seconds/Time
Tape Length	20 m
Usability in a Path	180 Times
	

VFK0823FSE (For end users)	
Type of Cassette	Full VHS Cassette
Cleaning Time	10 Seconds/Time
Tape Length	3.34 m
Usability in a Path	30 Times



Note:

The tape material itself is the same in both types.

3. ADJUSTMENT PROCEDURES

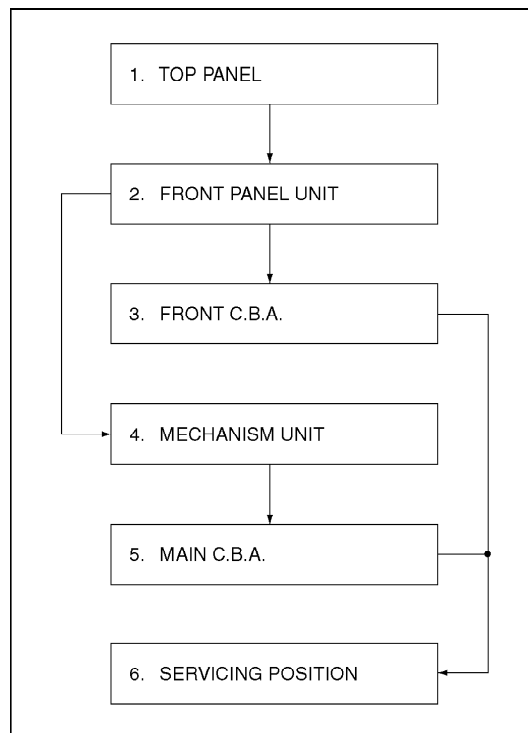
3.1. DISASSEMBLY METHOD

3.1.1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.

When reassembling, perform the steps in the reverse order.

Fig. D1

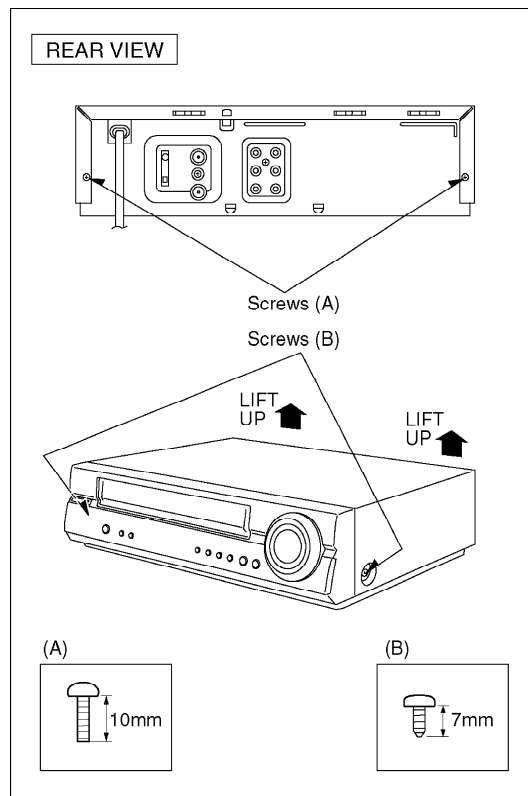


3.1.2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove	2 Screws (A)
Remove	2 Screws (B)

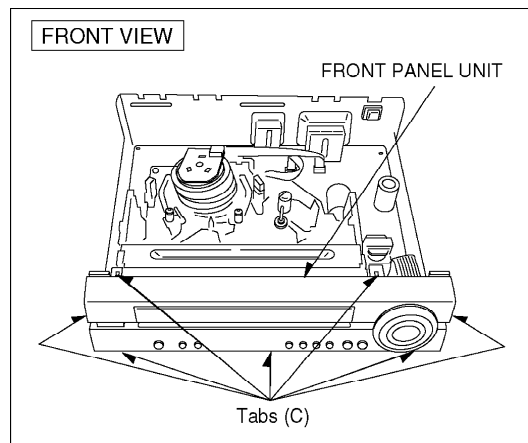
Fig.D2



2. REMOVAL OF THE FRONT PANEL UNIT

Unlock	7 Tabs (C)
--------	------------

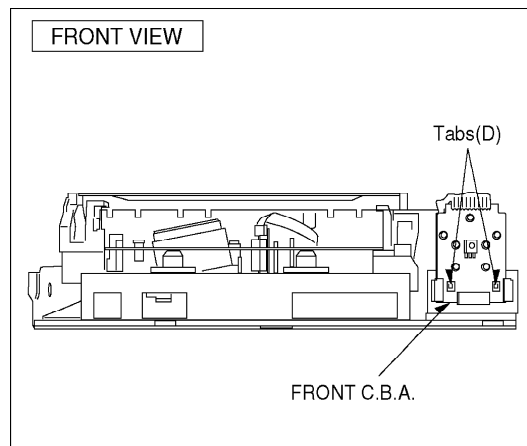
Fig. D3



3. REMOVAL OF THE FRONT C.B.A.

Remove	2 Tabs (D)
--------	------------

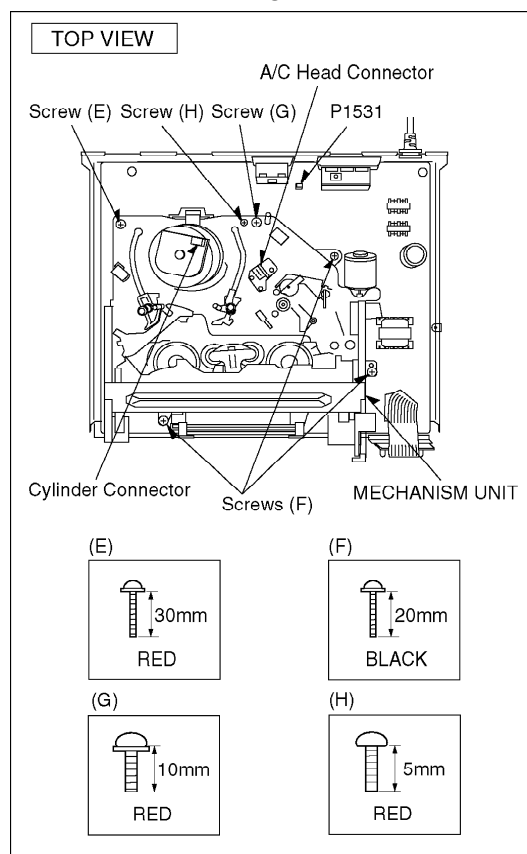
Fig. D4



4. REMOVAL OF THE MECHANISM UNIT

Remove	Screw (E)
Remove	3 Screws (F)
Remove	Screw (G)
Remove	Screw (H)
Disconnect	Cylinder Connector
Disconnect	A/C Head Connector
Disconnect	P1531

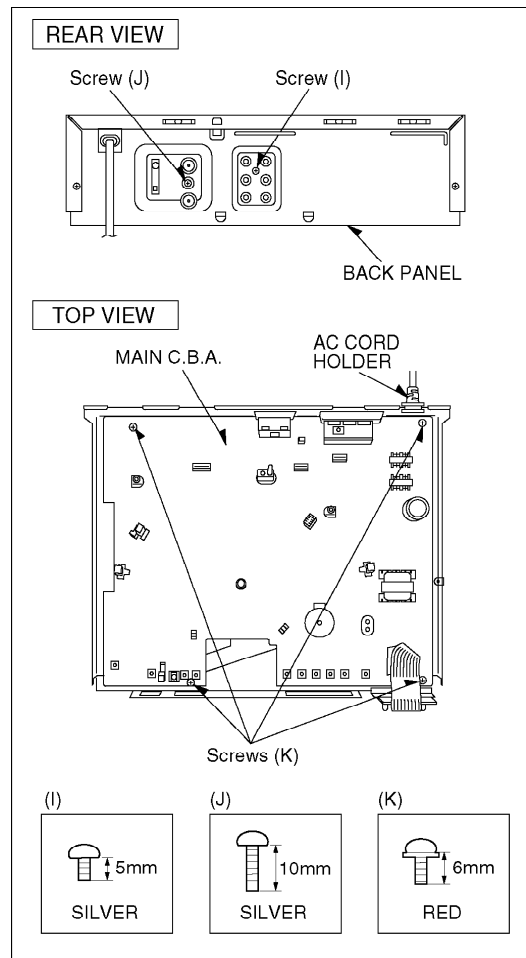
Fig. D5



5. REMOVAL OF THE MAIN C.B.A.

Remove	Screw (I)
Remove	Screw (J)
Remove	3 Screws (K)
Remove	AC CORD HOLDER

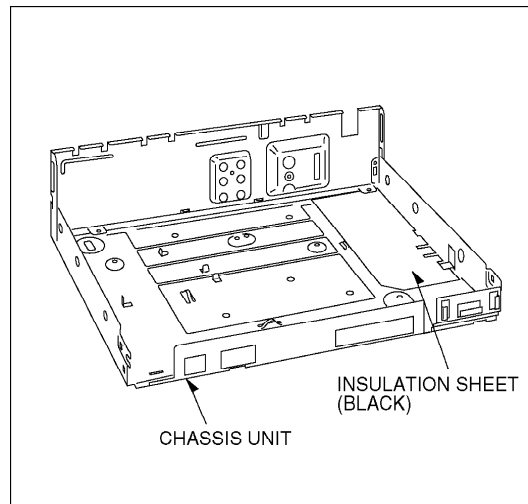
Fig. D6



NOTE:

Before mounting the MAIN C.B.A. onto the frame, be sure to confirm that the insulation sheet is mounted on the frame as shown in [Fig. D7](#).

Fig. D7

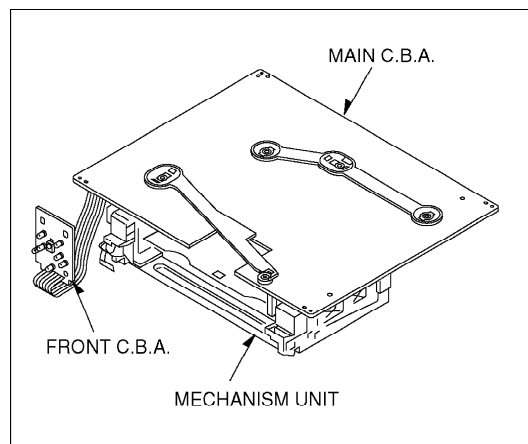


6. SERVICING POSITION

Install the Mechanism Unit on to the MAIN C.B.A..

Then fix a screw (H), and connect two flexible card Connectors (Cylinder connector, AC Head connector) and P1531 as shown in **Fig. D5**.

Fig. D8



3.2. MECHANICAL ADJUSTMENT PROCEDURES

Refer to the Service Manual for R4-Mechanism Chassis.
(Order No. VRD0202010C8)

CAUTIONS:

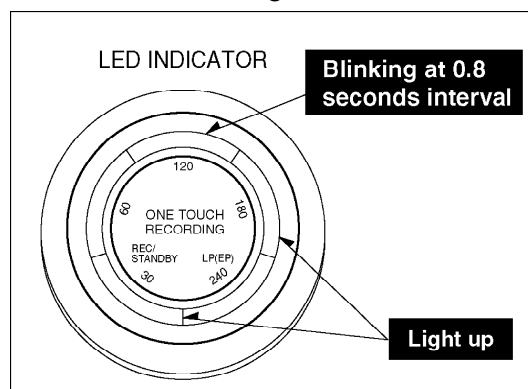
To turn on the Adjustment Mode for Tape Interchangeability, set to the service mode 2 as follows.
(Auto Tracking is turned off.)

1. Press the FF and EJECT buttons simultaneously for 3 seconds.
2. Press the FF and EJECT buttons simultaneously more once to set the Service Mode 2.

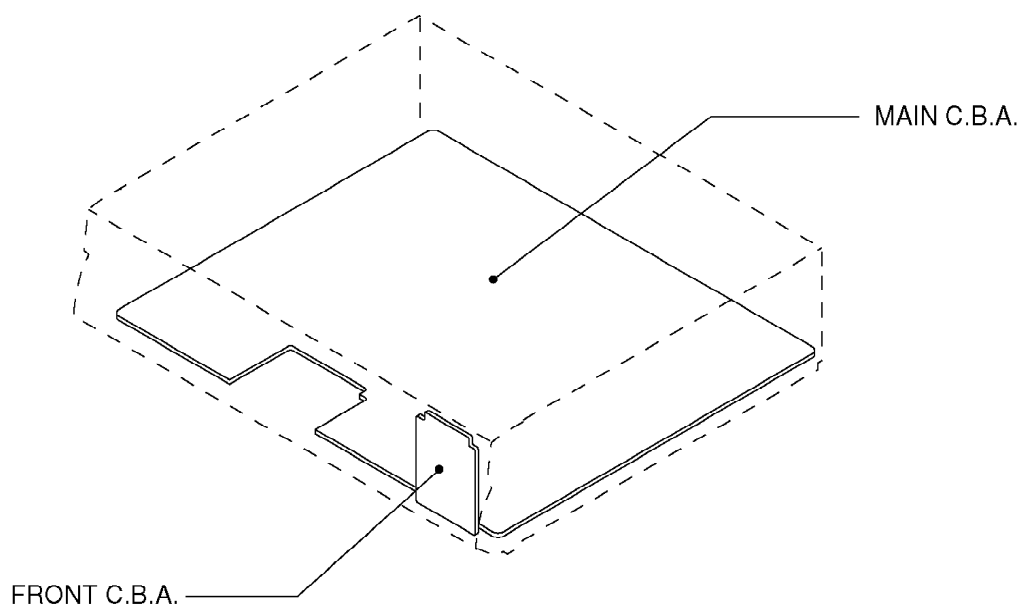
In this Service Mode 2, the LEDs are illuminated as shown in **Fig. D9**

This service mode 2 is released when pressing the FF and EJECT buttons simultaneously more twice.

Fig. D9



3.2.1. CIRCUIT BOARD LAYOUT



3.3. ELECTRICAL ADJUSTMENT PROCEDURES

3.3.1. TEST EQUIPMENT

The following equipments are required for Electrical Adjustments.

1. Monitor TV
2. VHS Alignment Tape

- Part No.: VFJ8125H3F (PAL)

3.3.2. VCR SETTING

When no indication in the procedure, set each selector by using Menu Mode as follows.

1. SYSTEM: AUTO

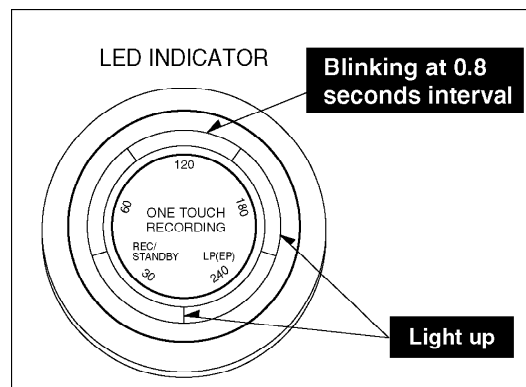
3.3.3. ADJUSTMENT

- PG SHIFTER ADJUSTMENT

1. Press the FF and EJECT buttons simultaneously for 3 seconds.
2. Press the FF and EJECT buttons simultaneously more once to set the Service Mode 2.

The LEDs are illuminated as follows.

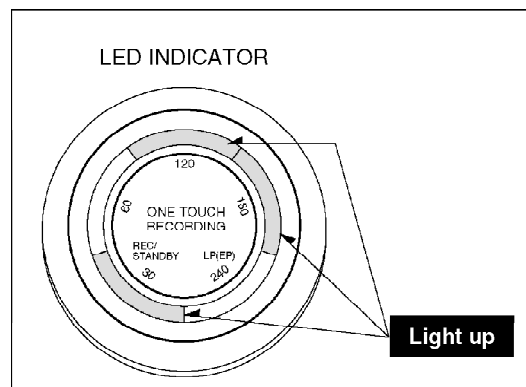
Fig. E1



3. Press the EJECT button for 3 seconds to set the PG Shifter Adjustment Mode.

The LEDs are illuminated as follows.

Fig. E2



4. Insert the Alignment Tape. (PAL: VFJ8125H3F)

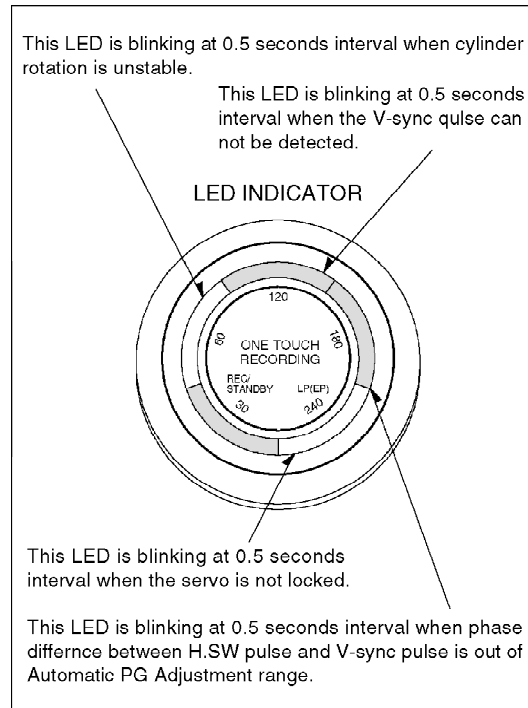
This adjustment is automatically started.

(During the adjustment, the picture will be appeared on the monitor.)

When this adjustment is terminated, the following operation or indication will be done.

- Adjustment completed: Cassette tape will be ejected.

- **Adjustment incomplete: Some LEDs are illuminated as follows.**
When adjustment is incomplete, check the Servo/System Control circuit and Cylinder unit.



This Service Mode 2 is released when pressing the FF and EJECT buttons simultaneously more twice.

4. ABBREVIATIONS

5. INPUT/OUTPUT CHART FOR IC6001

Fig. MP1

Fig. MP2

Fig. MP3

Fig. MP4

6. WAVEFORM TABLE & VOLTAGE CHART

6.1. WAVEFORM TABLE

6.2. VOLTAGE CHART

7. BLOCK DIAGRAMS

7.1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

7.2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

8. SCHEMATIC DIAGRAMS

8.1. POWER TRANSFORMER SECTION IN MAIN SCHEMATIC DIAGRAM

8.2. SYSTEM CONTROL & SERVO IN MAIN SCHEMATIC DIAGRAM

8.3. LUMINANCE & CHROMINANCE/ AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

8.4. POWER SUPPLY/ RF SECTION IN MAIN SCHEMATIC DIAGRAM

8.5. KEY SWITCH & LED DRIVE SECTION IN MAIN SCHEMATIC DIAGRAM

8.6. FRONT SCHEMATIC DIAGRAM

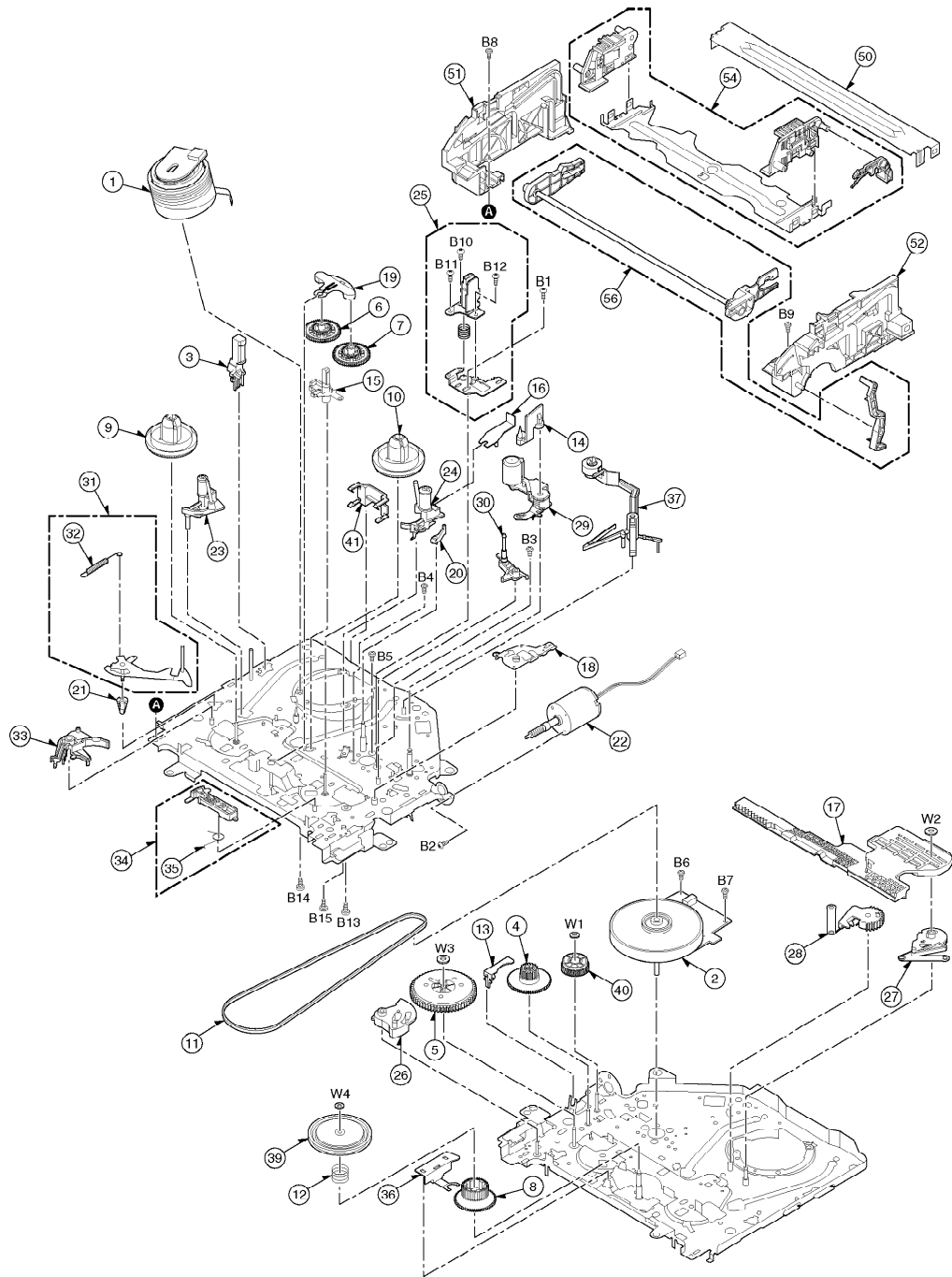
9. CIRCUIT BOARD ASSEMBLIES

9.1. MAIN C.B.A.

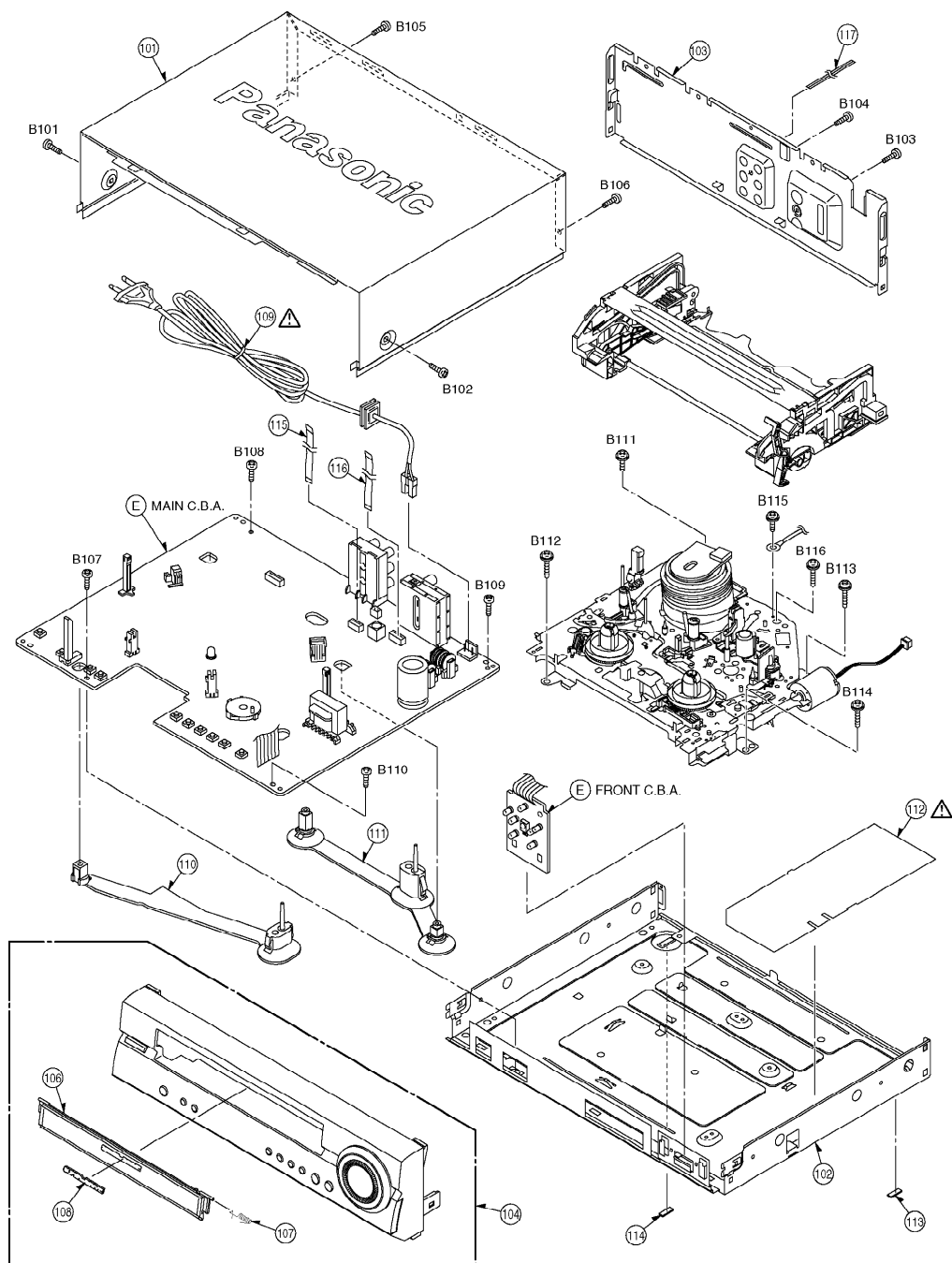
9.2. FRONT C.B.A.

10. EXPLODED VIEWS

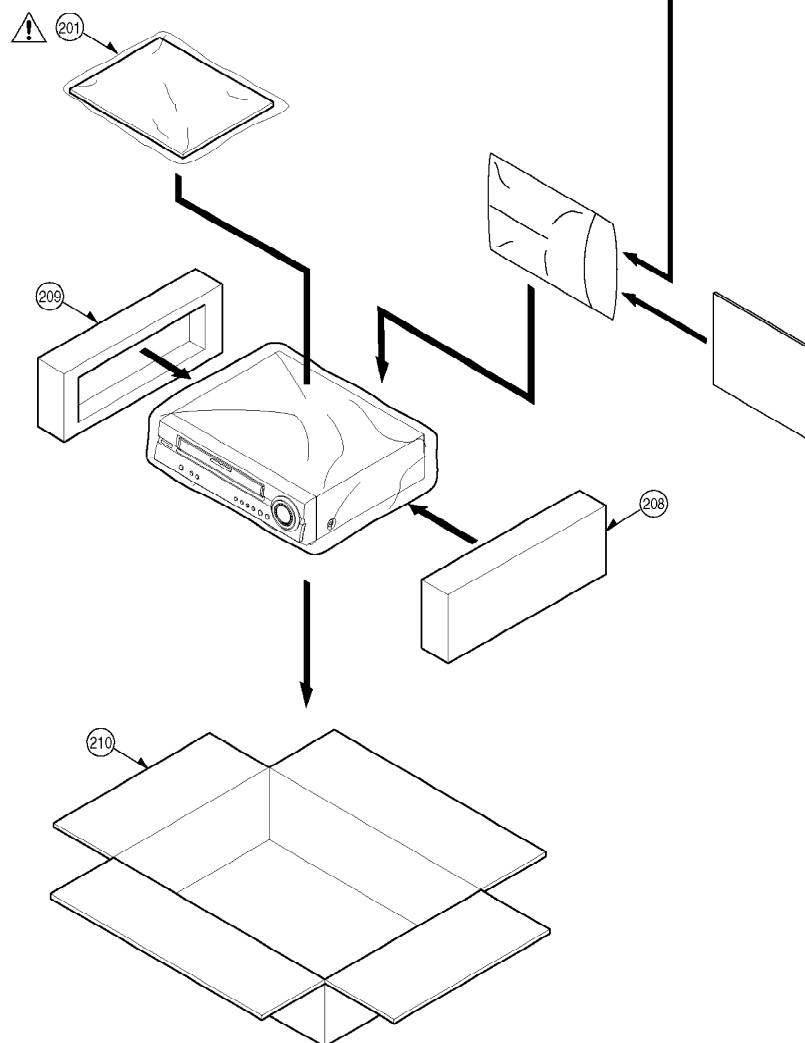
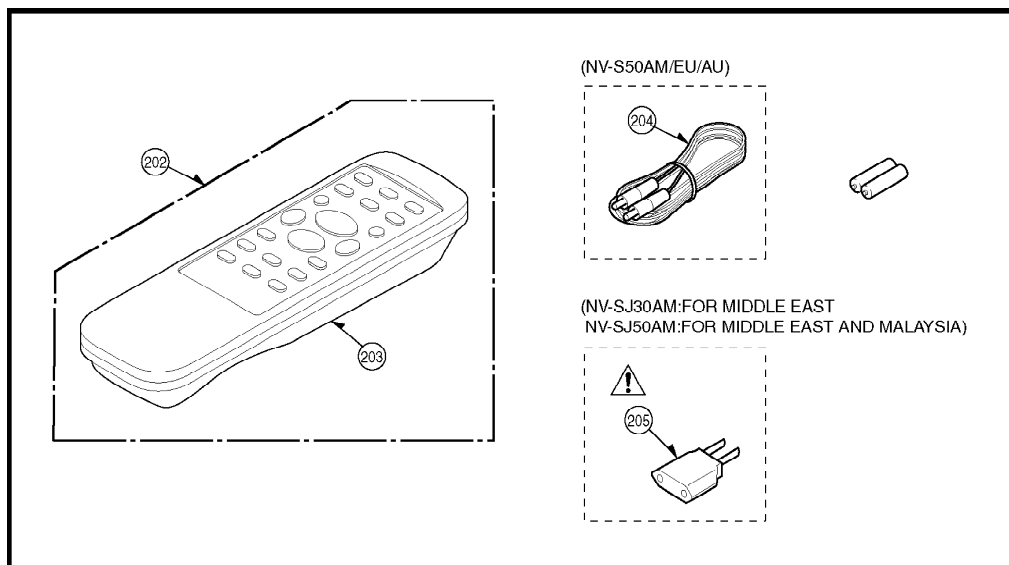
10.1. CHASSIS PARTS SECTION



10.2. CASING PARTS SECTION



10.3. PACKING PARTS SECTION



11. REPLACEMENT PARTS LIST

11.1. CHASSIS PARTS SECTION PARTS LIST

Note: 1. "Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark Δ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. "[MAV]" in the Remarks column shows that the parts is/are supplied from MAV.

Ref. No.	Part No.	Part Name & Description	Remarks
<u>1</u>	VEG1593-R	CYLINDER UNIT	[MAV] NV-SJ30AM/EU/PMP
<u>1</u>	VEG1590-R	CYLINDER UNIT	[MAV] NV-SJ50AM
<u>1</u>	VEG1591-R	CYLINDER UNIT	[MAV] NV-SJ50AU/EU
<u>2</u>	VEM0750	CAPSTAN UNIT	[MAV]
<u>3</u>	L1AZ00000004	FE HEAD	
<u>4</u>	VDG1510	INTERMEDIATE GEAR	[MAV]
<u>5</u>	VDG1511	MAIN CAM GEAR	[MAV]
<u>6</u>	VDG1512	IDLER GEAR	[MAV]
<u>7</u>	VDG1512	IDLER GEAR	[MAV]
<u>8</u>	VDG1514	CHANGE GEAR	[MAV]
<u>9</u>	VDR0372	REEL TABLE	[MAV]
<u>10</u>	VDR0372	REEL TABLE	[MAV]
<u>11</u>	VDV0391	CAPSTAN BELT	[MAV]
<u>12</u>	VMB3550	CHANGE GEAR SPRING	[MAV]
<u>13</u>	VMD4249	WORM SHAFT HOLDER	[MAV]
<u>14</u>	VMD4252	OPENER PIECE	[MAV]
<u>15</u>	VMD4253	LED PRISM	[MAV]
<u>16</u>	VMD4611	TAPE GUIDE	[MAV]
<u>17</u>	VML3624	MAIN LEVER	[MAV]
<u>18</u>	VML3626	PINCH CHARGE ARM	[MAV]
<u>19</u>	VML3632	IDLER ARM	[MAV]
<u>20</u>	VMX3092	P4 CAP	[MAV]
<u>21</u>	VDB1431	TENSION ARM BOSH	
<u>22</u>	VEM0751	LOADING MOTOR UNIT	[MAV]
<u>23</u>	VXA7105	SUPPLY SHAFT HOLDER UNIT	[MAV]
<u>24</u>	VXA7106	TAKE UP SHAFT HOLDER UNIT	[MAV]
<u>25</u>	VXA7107	AC HEAD UNIT	[MAV]
<u>26</u>	VXA7311	SECTOR GEAR UNIT	[MAV]
<u>27</u>	VXL3107	SUPPLY LOADING ARM UNIT	[MAV]
<u>28</u>	VXL3108	TAKE UP LOADING ARM UNIT	[MAV]
<u>29</u>	VXL3109	PINCH ARM UNIT	[MAV]
<u>30</u>	VXL3110	P5 ARM UNIT	[MAV]
<u>31</u>	VXL3111	TENSION ARM UNIT	[MAV]
<u>32</u>	VMB3547	TENSION SPRING	[MAV]
<u>33</u>	VXL3112	SUPPLY BRAKE ARM UNIT	[MAV]
<u>34</u>	VXL3113	TAKE UP BRAKE ARM UNIT	[MAV]
<u>35</u>	VMB3548	TAKE UP BRAKE SPRING	[MAV]
<u>36</u>	VXL3124	CHANGE LEVER UNIT	[MAV]
<u>37</u>	VXL3131	CLEANER ARM UNIT	[MAV]
<u>39</u>	VXP2133	CENTRE CLUTCH UNIT	[MAV]
<u>40</u>	VXP2168	TORQUE CLUTCH UNIT	[MAV]
<u>41</u>	VMD4590	FLAT CABLE HOLDER (5P)	[MAV] NV-SJ30AM/EU/PMP
<u>41</u>	VMD4344	FLAT CABLE HOLDER (10P)	[MAV] NV-SJ50AM/AU/EU
<u>50</u>	VMA0L25	TOP PLATE	[MAV]
<u>51</u>	VMD4255	SIDE PLATE (L)	[MAV]
<u>52</u>	VMD4254	SIDE PLATE (R)	[MAV]
<u>54</u>	VXA7110	CASSETTE HOLDER UNIT	[MAV]

Ref. No.	Part No.	Part Name & Description	Remarks
56	VXL3114KIT	KIT,MAIN SHAFT U & OPENER LEVER	[MAV]
B1	VHD1044	SCREW	
B2	XSN3+35	SCREW	[MAV]
B3	XTN26+7J	SCREW	
B4	XTN26+7J	SCREW	
B5	XTN26+7J	SCREW	
B6	XTV26+5F	SCREW	
B7	XTV26+5F	SCREW	
B8	XTV26+8FR	SCREW	
B9	XTV26+8FR	SCREW	
B10	VHD1066	SCREW	
B11	VHD1066	SCREW	
B12	VHD1185	SCREW	
B13	VHD1095	SCREW	
B14	VHD1117	SCREW	
B15	VHD1117	SCREW	
W1	VMX2208	WASHER	
W2	VMX3114	WASHER	[MAV]
W3	VMX2699	WASHER	
W4	VMX3196	WASHER	[MAV]

11.2. CASING PARTS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.
3. * [MAV] * in the Remarks column shows that the parts is/are supplied from MAV.

Ref. No.	Part No.	Part Name & Description	Remarks
101	VGM1866	TOP PANEL	[MAV] NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
101	VGM1872	TOP PANEL	[MAV] NV-SJ30EU
102	VMP7221	CHASSIS FRAME	[MAV]
103	VMP7222	BACK PANEL	[MAV] NV-SJ30AM/EU/PMP
103	VMP7223	BACK PANEL	[MAV] NV-SJ50AM/AU/EU
104	VYP8552	FRONT PANEL UNIT	[MAV] NV-SJ30AM
104	VYP8553	FRONT PANEL UNIT	[MAV] NV-SJ30EU
104	VYP8555	FRONT PANEL UNIT	[MAV] NV-SJ30PMP
104	VYP8554	FRONT PANEL UNIT	[MAV] NV-SJ50AM/AU/EU
106	VKF3583	BLINDER PANEL	[MAV] NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
106	VKF3584	BLINDER PANEL	[MAV] NV-SJ30EU
107	VMB2521	BLINDER SPRING	
108	VGB0554	SUPER DRIVE BADGE	
109	VJA1038	AC CORD	
110	VMX3115	MECHANISM SPACER (F)	[MAV]
111	VMX3229	MECHANISM SPACER (R)	[MAV]
112	VMZ3237	BARRIER	 [MAV]
113	VKA0364	FOOT	[MAV]
114	VKA0364	FOOT	[MAV]
115	VWJ060W140MM	FLAT CARD CABLE (6P)	[MAV] P4001-AC HEAD

Ref. No.	Part No.	Part Name & Description	Remarks
116	VWJ07AW190MM	FLAT CARD CABLE (7P)	[MAV] P2501-CYLINDER
117	VWB0124	VINYL TWIST TIE	[MAV]
B101	VHD1094	SCREW	NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
B101	VHD1041	SCREW	NV-SJ30EU
B102	VHD1094	SCREW	NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
B102	VHD1041	SCREW	NV-SJ30EU
B103	XSB3+5FC	SCREW	[MAV] NV-SJ50AM/AU/EU
B104	XTB3+10JFC	SCREW	[MAV] NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
B104	XTB3+10JFZ	SCREW	NV-SJ30EU
B105	XTB3+10JFC	SCREW	[MAV] NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
B105	XTB3+10JFZ	SCREW	NV-SJ30EU
B106	XTB3+10JFC	SCREW	[MAV] NV-SJ30AM/PMP,NV-SJ50AM/AU/EU
B106	XTB3+10JFZ	SCREW	NV-SJ30EU
B107	XTW3+6TR	SCREW	[MAV]
B108	XTW3+6TR	SCREW	[MAV]
B109	XTW3+6TR	SCREW	[MAV]
B110	XTW3+6TR	SCREW	[MAV]
B111	VHD1452	SCREW	[MAV]
B112	VHD1453	SCREW	[MAV]
B113	VHD1453	SCREW	[MAV]
B114	VHD1453	SCREW	[MAV]
B115	XTV26+5FR	SCREW	[MAV]
B116	XTW3+10PR	SCREW	

11.3. PACKING PARTS SECTION PARTS LIST

Note: 1. "Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark Δ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. " [MAV] " in the Remarks column shows that the parts is/are supplied from MAV.

Ref. No.	Part No.	Part Name & Description	Remarks
201	VQT9780	OPERATING INSTRUCTIONS (ENGLISH/ ARABIC/URDU/PERSIAN)	⚠ [MAV] NV-SJ30AM (FOR EXCEPT MALAYSIA & MIDDLE EASTA)
201	VQT9781	OPERATING INSTRUCTIONS (ENGLISH/ RUSSIAN)	⚠ [MAV] NV-SJ30AM (FOR MIDDLE EAST)
201	VQT9782	OPERATING INSTRUCTIONS (ENGLISH)	⚠ [MAV] NV-SJ30AM (FOR MALAYSIA)
201	VQT9785	OPERATING INSTRUCTIONS (ENGLISH/ RUSSIAN)	⚠ [MAV] NV-SJ30EU
201	VQT9783	OPERATING INSTRUCTIONS (ENGLISH)	⚠ [MAV] NV-SJ30PMP
201	VQT9786	OPERATING INSTRUCTIONS (ENGLISH/ ARABIC/URDU/PERSIAN)	⚠ [MAV] NV-SJ50AM (FOR EXCEPT MALAYSIA & MIDDLE EASTA)
201	VQT9787	OPERATING INSTRUCTIONS (ENGLISH/ RUSSIAN)	⚠ [MAV] NV-SJ50AM (FOR MIDDLE EAST)
201	VQT9788	OPERATING INSTRUCTIONS (ENGLISH/ ARABIC)	⚠ [MAV] NV-SJ50AM (FOR MALAYSIA)
201	VQT9997	OPERATING INSTRUCTIONS (ENGLISH/ RUSSIAN)	⚠ [MAV] NV-SJ50AU
201	VQT9789	OPERATING INSTRUCTIONS (ENGLISH/ RUSSIAN/URDU/CZECHOSLOVAK/ HANGARIAN)	⚠ [MAV] NV-SJ50EU
202	N2QADB000002	REMOTE CONTROLLER	[MAV]
203	R0213-720021	BATTERY COVER	[MAV]
204	VJA1124	DIN RF CABLE	NV-SJ50AM
204	VJA1089	DIN RF CABLE	⚠ NV-SJ50AU/EU K1TWACC00001
205	VJP2974-M	AC PLUG ADAPTOR	⚠ [MAV] NV-SJ30AM (FOR MIDDLE EAST),NV-SJ50AM (FOR MALAYSIA & MIDDLE EAST)
208	VPN5738	CUSHION (L)	[MAV]
209	VPN5739	CUSHION (R)	[MAV]
210	VPG0P60	PACKING	[MAV] NV-SJ30AM (FOR EXCEPT MALAYSIA & MIDDLE EASTA)
210	VPG0P61	PACKING	[MAV] NV-SJ30AM (FOR MIDDLE EAST)
210	VPG0P62	PACKING	[MAV] NV-SJ30AM (FOR MALAYSIA)
210	VPG0P65	PACKING	[MAV] NV-SJ30EU
210	VPG0P63	PACKING	[MAV] NV-SJ30PMP
210	VPG0P66	PACKING	[MAV] NV-SJ50AM (FOR EXCEPT MALAYSIA & MIDDLE EASTA)
210	VPG0P67	PACKING	[MAV] NV-SJ50AM (FOR MIDDLE EAST)
210	VPG0P68	PACKING	[MAV] NV-SJ50AM (FOR MALAYSIA)
210	VPG0P69	PACKING	[MAV] NV-SJ50AU
210	VPG0P70	PACKING	[MAV] NV-SJ50EU
		SERVICE FIXTURES & TOOLS	
	VFJ8125H3F	VHS ALIGNMENT TAPE (PAL)	
	VFK0335	RETAINING RING REMOVER (3mm/ 4mm)	
	VFK0329	POST ADJUSTMENT SCREWDRIVER	
	VFK0326	HEX WRENCH SET	
	VFK0132	BACK TENSION METER	
	VFK27	HEAD CLEANING STICK	
	VFK1024	MOLYTONE GREASE	
	VFK0330	FINE ADJUSTMENT GEAR DRIVER	
	VFK1301	SILICONE GREASE	
	VFK1298A	FLOIL GREASE	

11.4. ELECTRICAL PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE: Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.
 3. Unless otherwise specified,
 All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=μF.
 4. The P.C. Board units marked with  show below the main assembled parts.
 5. The marking (H/L) indicates the retention time is limited for this item.
 After the discontinuation of this assembly in production, it will no longer be available.
 6. "[MAV]" in the Remarks column shows that the parts is/are supplied from MAV.
 7. * "1", * "2", * "3", * "4" in the Remarks column shows the models as follows.
 * "1": NV-SJ30AM
 * "2": NV-SJ30EU
 * "3": NV-SJ30PMP
 * "4": NV-SJ30AM
 * "5": NV-SJ50AU/EU

Ref. No.	Part No.	Part Name & Description	Remarks
	VEP06E66A	MAIN C.B.A.	(RTL)[MAV] *1 INCLUDING THE FRONT C.B.A.(VEP04796A)
	VEP06E66B	MAIN C.B.A.	(RTL)[MAV] *2 INCLUDING THE FRONT C.B.A.(VEP04796A)
	VEP06E66C	MAIN C.B.A.	(RTL)[MAV] *3 INCLUDING THE FRONT C.B.A.(VEP04796A)
	VEP06E66E	MAIN C.B.A.	(RTL)[MAV] *4 INCLUDING THE FRONT C.B.A.(VEP04796A)
	VEP06E66F	MAIN C.B.A.	(RTL)[MAV] *5 INCLUDING THE FRONT C.B.A.(VEP04796A)
	VEP04796A	FRONT C.B.A.	(RTL)[MAV] C.B.A. IS INCLUDED IN MAIN C.B.A.(VEP06E66A/B/C/E/F)
	VEP06E66A	MAIN C.B.A.	(RTL)[MAV] *1
	VEP06E66B	MAIN C.B.A.	(RTL)[MAV] *2
	VEP06E66C	MAIN C.B.A.	(RTL)[MAV] *3
	VEP06E66E	MAIN C.B.A.	(RTL)[MAV] *4
	VEP06E66F	MAIN C.B.A.	(RTL)[MAV] *5
C1101	F1BAF1020020	CERAMIC CAPACITOR	 [MAV]
C1102	ECQB1H104JM3	P.CAPACITOR 50V 0.1U	*1,*3,*4
C1103	F1A3A331A029	C.CAPACITOR 1KV 330P	[MAV] *1,*3,*4 F1A3A331A020
C1103	F1A3A271A028	C.CAPACITOR 1KV 270P	*2,*5 F1A3A271A034
C1104	ECEC2GG680FZ	E.CAPACITOR 400V 68U	
C1105	ECQB1H223JM3	P.CAPACITOR 50V 0.022U	[MAV]
C1106	ECQB1H473JM3	P.CAPACITOR 50V 0.047U	
C1107	ECQB1H103JZ	P.CAPACITOR 50V 0.01U	*2,*5
C1108	ECQB1H104JM3	P.CAPACITOR 50V 0.1U	
C1110	ECQU2A333MVA	P.CAPACITOR 250V 0.033U	 *1,*3,*4
C1110	ECQU2A683MVA	P.CAPACITOR 250V 0.068U	 *2,*5
C1111	VCK0286B331	CERAMIC CAPACITOR	 F1BAF331A013
C1201	VCEA1CJH821E	E.CAPACITOR 16V 820U	[MAV] F2A1C8210002
C1202	ECA1CM101	E.CAPACITOR 16V 100U	
C1203	F2A1A1220008	E.CAPACITOR 10V 1200U	[MAV]
C1204	ECA1AM221	E.CAPACITOR 10V 220U	

Ref. No.	Part No.	Part Name & Description	Remarks
C1205	ECQB1H104JM3	P.CAPACITOR 50V 0.1U	
C1208	F1B3A332A004	C.CAPACITOR 1KV 3300P	[MAV] *2,*5
C1301	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C1302	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C1303	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C1304	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C1305	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C1306	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C1307	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C2001	F1J1H330A618	C.CAPACITOR 50V 33P	[MAV]
C2002	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2003	F1J1H392A614	C.CAPACITOR 50V 3900P	[MAV]
C2004	ECEA1CKS100	E.CAPACITOR 16V 10U	
C2005	ECEA0JKS220	E.CAPACITOR 6.3V 22U	
C2006	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C2501	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C2502	ECJ2VB1E563K	C.CAPACITOR CH 25V 0.056U	
C2503	ECJ2VB1E563K	C.CAPACITOR CH 25V 0.056U	
C2504	ECEA1AKS221	E.CAPACITOR 10V 220U	
C2506	ECJ2VB1H223K	C.CAPACITOR CH 50V 0.022U	
C2507	ECJ2VB1H223K	C.CAPACITOR CH 50V 0.022U	
C2508	ECJ2VB1C224K	C.CAPACITOR CH 16V 0.22U	
C2509	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C2510	ECUV1H182KBN	C.CAPACITOR CH 50V 1800P	ECJ2VB1H182K
C2511	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2513	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2514	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2515	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2517	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2518	ECA1EM101	E.CAPACITOR 25V 100U	
C2519	ECJ2VB1E563K	C.CAPACITOR CH 25V 0.056U	
C2521	ECUV1H102KBN	C.CAPACITOR CH 50V 1000P	ECJ2VB1H102K
C2522	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C2523	ECJ2VB1E563K	C.CAPACITOR CH 25V 0.056U	
C2524	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C2526	ECA1EM101	E.CAPACITOR 25V 100U	
C2527	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C3001	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C3003	ECUV1H120JCN	C.CAPACITOR CH 50V 12P	ECJ2VC1H120J
C3004	ECJ2VC1H121J	C.CAPACITOR CH 50V 120P	
C3005	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3006	ECUV1H390JCN	C.CAPACITOR CH 50V 39P	ECJ2VC1H390J
C3007	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3008	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3009	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3010	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3011	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3012	ECUV1H220JCN	C.CAPACITOR CH 50V 22P	ECJ2VC1H220J
C3013	ECUV1H120JCN	C.CAPACITOR CH 50V 12P	ECJ2VC1H120J
C3014	ECUV1H070DCN	C.CAPACITOR CH 50V 7P	ECJ2VC1H070D
C3015	ECEA1EKS3R3	E.CAPACITOR 25V 3.3U	
C3016	ECEA1CKS100	E.CAPACITOR 16V 10U	
C3017	ECEA1HKS2R2	E.CAPACITOR 50V 2.2U	
C3018	ECEA1HKS010	E.CAPACITOR 50V 1U	

Ref. No.	Part No.	Part Name & Description	Remarks
C3019	ECUV1H271JCN	C.CAPACITOR CH 50V 270P	ECJ2VC1H271J
C3020	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C3021	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C3023	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C3024	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3027	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3028	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C3030	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3031	ECUV1H100DCN	C.CAPACITOR CH 50V 10P	
C3032	ECUV1H120JCN	C.CAPACITOR CH 50V 12P	ECJ2VC1H120J
C3033	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C3034	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C3035	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C3036	ECJ2VB1C224K	C.CAPACITOR CH 16V 0.22U	
C3037	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C3038	ECUV1H102KBN	C.CAPACITOR CH 50V 1000P	ECJ2VB1H102K
C3041	ECUV1H030CCN	C.CAPACITOR CH 50V 3P	ECJ2VC1H030C
C3042	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C3043	ECUV1C154KBN	C.CAPACITOR CH 16V 0.15U	
C3044	ECEA1HKAR47B	E.CAPACITOR 50V 0.47U	
C3045	ECJ2VB1H223K	C.CAPACITOR CH 50V 0.022U	
C3046	ECJ2VB1H472K	C.CAPACITOR CH 50V 4700P	[MAV]
C3047	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C3048	ECEA1HKS010	E.CAPACITOR 50V 1U	
C3049	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C3051	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C3052	ECEA1EKS3R3	E.CAPACITOR 25V 3.3U	
C3053	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C3054	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	
C3055	ECEA1CKA470	E.CAPACITOR 16V 47U	
C3057	ECA0JM471G	E.CAPACITOR 6.3V 470U	
C3058	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	*4,*5
C3059	ECEA0JKS101	E.CAPACITOR 6.3V 100U	*4,*5
C3060	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	*4,*5
C4001	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C4002	ECUV1H220JCN	C.CAPACITOR CH 50V 22P	*2,*5 ECJ2VC1H220J
C4003	ECEA0JKA330B	E.CAPACITOR 6.3V 33U	
C4004	ECEA1HKS3R3	E.CAPACITOR 50V 3.3U	
C4005	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	
C4006	ECUV1H182KBN	C.CAPACITOR CH 50V 1800P	ECJ2VB1H182K
C4007	ECUV1H182KBN	C.CAPACITOR CH 50V 1800P	ECJ2VB1H182K
C4008	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C4009	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4010	ECJ2VB1C104K	C.CAPACITOR CH 16V 0.1U	
C4011	ECEA0JKS220	E.CAPACITOR 6.3V 22U	
C4012	ECJ2VB1H682K	C.CAPACITOR CH 50V 6800P	
C4013	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4014	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C4017	D0GDR00JA017	M.RESISTOR 0	[MAV]
C4018	ECUV1H471JCN	C.CAPACITOR CH 50V 470P	*2,*5 ECJ2VC1H471J
C4024	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	ECJ2XB1H152K
C4025	ECJ2VB1H223K	C.CAPACITOR CH 50V 0.022U	
C4026	ECA1AM221	E.CAPACITOR 10V 220U	
C4027	ECEA0JKS470	E.CAPACITOR 6.3V 47U	

Ref. No.	Part No.	Part Name & Description	Remarks
C4028	ECJ2VB1H471K	C.CAPACITOR CH 50V 470P	
C4029	ECQB1H682JM3	P.CAPACITOR 50V 6800P	
C4033	ECUV1H220JCN	C.CAPACITOR CH 50V 22P	*2,*5 ECJ2VC1H220J
C4036	ECQB1H223JM3	P.CAPACITOR 50V 0.022U	[MAV]
C4040	ECUV1H471JCN	C.CAPACITOR CH 50V 470P	*2,*5 ECJ2VC1H471J
C4101	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C5001	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C5002	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C5003	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C5004	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C5005	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C5006	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	ECJ2VB1H103K
C5007	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	*4,*5 ECJ2VB1H103K
C5008	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	*4,*5 ECJ2VB1H103K
C5009	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	*4,*5 ECJ2VB1H103K
C5010	ECUV1H103KBN	C.CAPACITOR CH 50V 0.01U	*4,*5 ECJ2VB1H103K
C6001	ECUV1H470JCN	C.CAPACITOR CH 50V 47P	ECJ2VC1H470J
C6002	ECUV1H470JCN	C.CAPACITOR CH 50V 47P	ECJ2VC1H470J
C6003	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C6004	ECUV1H221JCN	C.CAPACITOR CH 50V 220P	ECJ2VC1H221J
C6005	ECUV1H221JCN	C.CAPACITOR CH 50V 220P	ECJ2VC1H221J
C6007	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C6008	ECUV1H220JCN	C.CAPACITOR CH 50V 22P	ECJ2VC1H220J
C6009	ECUV1H270JCN	C.CAPACITOR CH 50V 27P	ECJ2VC1H270J
C6010	ECEA1HKS3R3	E.CAPACITOR 50V 3.3U	
C6011	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C6016	ECUV1H102KBN	C.CAPACITOR CH 50V 1000P	ECJ2VB1H102K
C6017	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C6018	ECUV1H221JCN	C.CAPACITOR CH 50V 220P	ECJ2VC1H221J
C6021	ECUV1H681JCN	C.CAPACITOR CH 50V 680P	
C7701	ECJ2VC1H101J	C.CAPACITOR CH 50V 100P	
C7702	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	
C7703	ECUV1H471JCN	C.CAPACITOR CH 50V 470P	ECJ2VC1H471J
C7704	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	
C7705	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C7706	F1J1E333A103	C.CAPACITOR 25V 0.033U	[MAV]
C7707	ECUV1H102KBN	C.CAPACITOR CH 50V 1000P	ECJ2VB1H102K
C7708	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C7709	ECUV1H471JCN	C.CAPACITOR CH 50V 470P	ECJ2VC1H471J
C7710	ECJ2VC1H101J	C.CAPACITOR CH 50V 100P	
C7711	ECUV1H820JCN	C.CAPACITOR CH 50V 82P	ECJ2VC1H820J
CU7001	VEQ2356	RF CONVERTER	⚠ [MAV] *4,*5
D1102	MA2C18500E	DIODE	⚠ [MAV] *2,*5
D1103	MAZ40270LF	DIODE	[MAV]
D1104	MA2C165001VT	DIODE	
D1105	DF08S-6622	DIODE	B0KB00000013
D1106	ERZVA5Z471	TRANSIENT/SURGE ABSORBER	⚠
D1107	AU01Z	DIODE	B0HAGM0000006
D1108	MA2C18500E	DIODE	⚠ [MAV] *1,*3,*4
D1109	MA2C18500E	DIODE	⚠ [MAV] *1,*3,*4
D1110	MA2C18500E	DIODE	⚠ [MAV]

Ref. No.	Part No.	Part Name & Description	Remarks
D1201	AK06	DIODE	[MAV] B0JAME000038
D1202	AK06	DIODE	[MAV] B0JAME000038
D1204	ERA83-004V5	DIODE	[MAV] B0JAGE000001
D1205	ERA83-004V5	DIODE	[MAV] B0JAGE000001
D1207	MA2180A	DIODE	MAZ21800A
D1301	MA4130N-L	DIODE	MAZ4130NL
D1302	MA4056N-H	DIODE	MAZ4056NH
D1303	MA4056N-H	DIODE	MAZ4056NH
D2001	MA2C165001VT	DIODE	
D2002	MA2C165001VT	DIODE	
D6001	B3EA00000072	LED	[MAV]
D7001	B3ABA0000402	LED	[MAV]
D7002	B3AAA0000540	LED	[MAV]
D7005	B3AAA0000540	LED	[MAV]
D7006	B3ABA0000402	LED	[MAV]
D7007	B3ABA0000402	LED	[MAV]
F1101	K5D162BK0005	FUSE	
IC1201	UPC1093J	IC	C0DAEMC00002
IC2001	C0DBCHD00002	IC	
IC2501	C1AB00001479	IC	[MAV]
IC3001	C1AB00001298	IC	
IC6001	C2CBHF000224	IC	[MAV]
IC6002	S93C46ADFJ-T	IC	[MAV]
IC6003	C0EBH0000218	IC	[MAV]
IC6004	B3NAA0000049	IC	[MAV]
IC6005	B3NAA0000049	IC	[MAV]
IR7001	PNA4611M07VT	PHOTO DIODE	
J1	VEE0T78	EARTH WIRE	[MAV]
JK3001	VJJ0679	PIN JACK 4-PIN	K2HA408B0039
JW7001	VWJ10F6150VV	FLAT CARD CABLE (10P)	[MAV]
K3002	D0GDR00JA017	M.RESISTOR 0	[MAV]
K3003	D0GDR00JA017	M.RESISTOR 0	[MAV]
K4502	D0GDR00JA017	M.RESISTOR 0	[MAV]
L1101	VLF1498G0R5	FILTER	 [MAV] *2,*5
L1102	VLF1498G0R3	LINE FILTER	 *1,*3,*4 G0B553C00001
L1102	VLF1498G0R5	FILTER	 [MAV] *2,*5
L1201	G0A220G00018	COIL	G0A220G00019
L1202	G0A220G00018	COIL	G0A220G00019
L3001	VLQ0599J391	COIL 390UH	G0C391JA0026
L3002	VLQ0599J180	COIL 18UH	G0C180JA0026
L3003	VLQ0599J680	COIL 68UH	G0C680JA0026
L3005	VLQ0599J390	COIL 39UH	G0C390JA0026
L3006	VLQ0822J330	COIL 33UH	[MAV]
L3008	G0C120JA0019	INDUCTOR	
L3009	VLQ0599J680	COIL 68UH	G0C680JA0026

Ref. No.	Part No.	Part Name & Description	Remarks
L3011	VLQ0599J680	COIL 68UH	*4,*5 G0C680JA0026
L3013	G0C1R0JA0019	INDUCTOR	*4,*5
L3014	VLQ0599J680	COIL 68UH	*4,*5 G0C680JA0026
L4001	VLQ0822J471	COIL 470UH	[MAV]
L5001	VLQ0822J680	COIL 68UH	[MAV]
L7701	G0C100JA0019	INDUCTOR	
L7702	VLQ0599J5R6	COIL 5.6UH	G0C5R6JA0026
LB1101	J0JKB0000028	FILTER	J0JKB0000027
LB1201	J0JKB0000028	FILTER	J0JKB0000027
LB1202	J0JKB0000028	FILTER	*1,*3,*4 J0JKB0000027
LB4001	D0GDR00JA017	M.RESISTOR 0	[MAV] *1,*3,*4
LB4001	J0JBC0000041	FILTER	 *2,*5
LB4003	D0GDR00JA017	M.RESISTOR 0	[MAV] *1,*3,*4
LB4003	J0JBC0000070	FILTER	 [MAV] *2,*5
LB4004	D0GDR00JA017	M.RESISTOR 0	[MAV] *1,*3,*4
LB4004	J0JBC0000070	FILTER	 [MAV] *2,*5
LB4005	D0GDR00JA017	M.RESISTOR 0	[MAV] *1,*3,*4
LB4005	J0JBC0000041	FILTER	 *2,*5
LB5001	D0GDR00JA017	M.RESISTOR 0	[MAV]
LB5002	D0GDR00JA017	M.RESISTOR 0	[MAV]
LB5003	D0GDR00JA017	M.RESISTOR 0	[MAV]
LB5004	D0GDR00JA017	M.RESISTOR 0	[MAV] *4,*5
LB5005	D0GDR00JA017	M.RESISTOR 0	[MAV] *4,*5
LB5006	D0GDR00JA017	M.RESISTOR 0	[MAV] *4,*5
LR1101	J1ZZA0000001	FILTER	
P1101	K1KA02A00104	CONNECTOR	
P1531	K1KA02A00375	CONNECTOR	[MAV]
P2501	VJS3537A007G	CONNECTOR (FEMALE) 7P	K1MN07A00020
P2571	K1KA08A00290	CONNECTOR	[MAV]
P4001	K1MZ02A00003	CONNECTOR	[MAV]
P4002	VJS3537A006G	CONNECTOR (FEMALE) 6P	K1MN06A00034
P5001	VJS3537A005G	CONNECTOR (FEMALE) 5P	*1,*2,*3 K1MN05A00020
P5001	VJS3537A010G	CONNECTOR (FEMALE) 10P	*4,*5 K1MN10A00036
Q1101	2SK2876	TRANSISTOR	[MAV] *2
Q1101	B1DEDQ000014	TRANSISTOR	*5
Q1102	2SC3311ASA	TRANSISTOR	
Q1103	B1DADT000002	TRANSISTOR	[MAV] *1,*3,*4
Q1103	2SK2645	TRANSISTOR	[MAV] *2,*5
Q1104	2SD1992A-R	TRANSISTOR	
Q1201	PS2561L2-1W	TRANSISTOR	 [MAV]
Q1301	2SC1959-Y	TRANSISTOR	
Q1302	2SD602A-R	TRANSISTOR	2SD0602AR
Q1303	2SD1273P	TRANSISTOR	[MAV] 2SD12730P
Q1501	PNA2604M01	PHOTO COUPLER	[MAV]
Q1502	PNA2604M01	PHOTO COUPLER	[MAV]
Q3001	2SD601A-R	TRANSISTOR	2SD0601AR
Q3002	2SB709A	TRANSISTOR	2SB0709A
Q3005	2SB709A	TRANSISTOR	2SB0709A
Q3007	2SC1959-Y	TRANSISTOR	

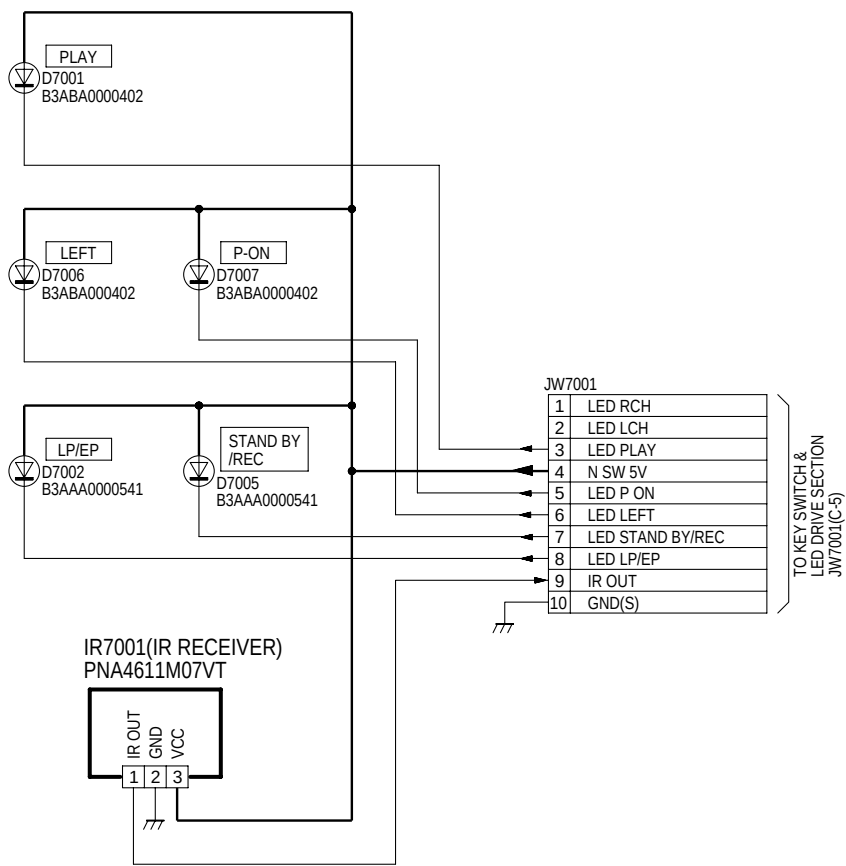
Ref. No.	Part No.	Part Name & Description	Remarks
Q4001	2SD1149	TRANSISTOR	
Q4002	2SD601A-R	TRANSISTOR	2SD0601AR
Q4003	2SB0710A0L	TRANSISTOR	
Q4004	2SD602A-R	TRANSISTOR	2SD0602AR
Q4101	2SD1996	TRANSISTOR	2SD199606A
Q4103	2SD1328-R	TRANSISTOR	2SD13280R
Q4104	2SD1328-R	TRANSISTOR	2SD13280R
Q6003	2SD601A-R	TRANSISTOR	2SD0601AR
Q7701	2SB709A	TRANSISTOR	2SB0709A
QR3001	UNR221300L	TRANSISTOR RESISTOR	
QR3002	UNR221300L	TRANSISTOR RESISTOR	
QR3003	UNR221300L	TRANSISTOR RESISTOR	
QR3004	UNR221300L	TRANSISTOR RESISTOR	
QR3005	UNR221300L	TRANSISTOR RESISTOR	
QR3006	UNR221300L	TRANSISTOR RESISTOR	
QR4001	UNR221100L	TRANSISTOR RESISTOR	
QR4002	UN2111	TRANSISTOR	UNR211100L
QR4101	UN2111	TRANSISTOR	UNR211100L
QR4102	UNR221300L	TRANSISTOR RESISTOR	
QR4103	UN2111	TRANSISTOR	UNR211100L
QR4104	UNR221300L	TRANSISTOR RESISTOR	
QR4502	UN2115TW	TRANSISTOR	UNR211500L
QR4504	UN2215	TRANSISTOR-RESISTOR	UNR2215
QR6001	UNR211200L	TRANSISTOR RESISTOR	[MAV]
QR7001	UNR221100L	TRANSISTOR RESISTOR	
QR7002	UNR221100L	TRANSISTOR RESISTOR	
QR7003	UNR221100L	TRANSISTOR RESISTOR	
QR7004	UNR221100L	TRANSISTOR RESISTOR	
QR7005	UNR221100L	TRANSISTOR RESISTOR	
R1101	ERDS2FJ331	C.RESISTOR 1/4W 330	*1,*3,*4
R1101	ERDS2FJ330	C.RESISTOR 1/4W 33	*2,*5
R1102	ERDS2FJ101	C.RESISTOR 1/4W 100	*2,*5
R1105	ERDS2TJ105T	C.RESISTOR 1/4W 1M	
R1106	ERDS2TJ105T	C.RESISTOR 1/4W 1M	
R1107	ERDS2FJ102	C.RESISTOR 1/4W 1K	*2,*5
R1108	ERG2SJ331	M.RESISTOR 2W 330	
R1109	ERDS2FJ101	C.RESISTOR 1/4W 100	
R1110	ERX1SJR51	M.RESISTOR 1W 0.51	*1,*3,*4
R1110	ERX1SJR47	M.RESISTOR 1W 0.47	*2,*5
R1112	ER0S2CKF1301	M.RESISTOR 1/4W 1.3K	
R1113	ERDS2FJ3R3	C.RESISTOR 1/4W 3.3	*2,*5
R1114	ERDS2FJ331	C.RESISTOR 1/4W 330	
R1115	ERDS2FJ104	C.RESISTOR 1/4W 100K	
R1201	ERJ6GEYF103	M.RESISTOR CH 1/10W 10K	
R1202	ERJ6GEYF222	M.RESISTOR CH 1/10W 2.2K	
R1203	ERJ6GEYF183	M.RESISTOR CH 1/10W 18K	[MAV] *1,*3,*4
R1203	ERJ6GEYF203	M.RESISTOR CH 1/10W 20K	[MAV] *2,*5
R1204	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	*1,*3,*4
R1204	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	*2,*5
R1205	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R1206	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	
R1301	ERDS2FJ471	C.RESISTOR 1/4W 470	

Ref. No.	Part No.	Part Name & Description	Remarks
R1302	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	
R1303	ERDS2FJ471	C.RESISTOR 1/4W 470	
R2001	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	
R2501	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R2502	ERJ6GEYJ1R2	M.RESISTOR CH 1/10W 1.2	
R2503	ERJ6GEYJ1R5	M.RESISTOR CH 1/10W 1.5	[MAV]
R2504	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R2505	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R2506	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R2507	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	
R2508	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R2511	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R2512	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R2513	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R2514	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R2515	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R2516	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R2517	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R3001	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	
R3002	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	
R3003	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R3004	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	
R3005	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	
R3006	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R3007	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R3008	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	
R3009	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R3010	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R3011	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R3012	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R3017	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R3018	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	
R3019	ERJ6GEYJ475	M.RESISTOR CH 1/10W 4.7M	
R3020	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	
R3021	D0GDR00JA017	M.RESISTOR 0	[MAV]
R3022	D0GDR00JA017	M.RESISTOR 0	[MAV]
R3024	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	
R3025	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	
R3026	D0GDR00JA017	M.RESISTOR 0	[MAV]
R3027	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R3028	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	
R3029	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	
R3030	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	
R3031	ERDS2FJ681	C.RESISTOR 1/4W 680	
R3032	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	*4,*5
R3033	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	*4,*5
R4001	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	
R4002	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4003	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	
R4004	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R4005	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	
R4006	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R4007	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	
R4008	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	

Ref. No.	Part No.	Part Name & Description	Remarks
R4009	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4010	D0GDR00JA017	M.RESISTOR 0	[MAV]
R4011	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4012	D0GDR00JA017	M.RESISTOR 0	[MAV] *1,*3,*4
R4012	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	*2,*5
R4013	D0GDR00JA017	M.RESISTOR 0	[MAV] *1,*3,*4
R4013	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	*2,*5
R4016	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4017	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R4018	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4019	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R4020	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R4021	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R4022	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	
R4101	ERJ6GEYJ4R7V	M.RESISTOR CH 1/10W 4.7	
R4102	ERDS2FJ102	C.RESISTOR 1/4W 1K	
R4103	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R4104	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	
R4105	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4106	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	
R6001	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R6002	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R6003	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R6004	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R6005	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	
R6006	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R6007	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R6008	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	
R6009	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R6010	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	*2,*5
R6010	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	*3
R6011	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	*4,*5
R6012	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R6013	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	*1,*2,*4,*5
R6014	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	
R6015	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	
R6016	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	
R6017	ERDS2FJ151	C.RESISTOR 1/4W 150	
R6018	ERJ6GEYJ121V	M.RESISTOR CH 1/10W 120	D0GD121JA003
R6019	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	
R6020	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	
R6021	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R6022	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R6023	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	
R6026	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R6027	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R6028	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R6029	ERJ6GEYF103	M.RESISTOR CH 1/10W 10K	
R6030	ERJ6GEYG223V	M.RESISTOR CH 1/10W 22K	
R6031	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	
R7001	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	
R7002	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	
R7003	ERJ6GEYJ512	M.RESISTOR CH 1/10W 5.1K	
R7004	ERJ6GEYJ362	M.RESISTOR CH 1/10W 3.6K	

Ref. No.	Part No.	Part Name & Description	Remarks
R7005	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R7006	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	
R7007	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R7008	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	
R7009	ERDS2TJ271	C.RESISTOR 1/4W 270	
R7010	ERDS2TJ271	C.RESISTOR 1/4W 270	
R7011	ERDS2TJ151	C.RESISTOR 1/4W 150	
R7012	ERDS2TJ151	C.RESISTOR 1/4W 150	
R7013	ERDS2TJ151	C.RESISTOR 1/4W 150	
R7016	ERJ6GEYJ362	M.RESISTOR CH 1/10W 3.6K	
R7017	ERJ6GEYJ512	M.RESISTOR CH 1/10W 5.1K	
R7701	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	
R7702	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	
R7703	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R7704	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R7705	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R7706	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
S6001	K0C111A00003	SWITCH	
S6002	K0ZZ00000598	SWITCH	[MAV]
S7001	EVQ21405R	SWITCH	EVQ21405RJ
S7002	EVQ21405R	SWITCH	EVQ21405RJ
S7003	EVQ21405R	SWITCH	EVQ21405RJ
S7004	EVQ21405R	SWITCH	EVQ21405RJ
S7005	EVQ21405R	SWITCH	EVQ21405RJ
S7006	EVQ21405R	SWITCH	EVQ21405RJ
S7007	EVQ21405R	SWITCH	EVQ21405RJ
S7008	EVQ21405R	SWITCH	EVQ21405RJ
S7009	EVQ21405R	SWITCH	EVQ21405RJ
S7010	EVQ21405R	SWITCH	EVQ21405RJ
T1201	G4D2A0000101	SWITCHING TRANSFORMER	⚠ [MAV] *1,*3,*4
T1201	G4D1A0000045	SWITCHING TRANSFORMER	⚠ [MAV] *2,*5
T4001	VLT0895	TRANSFORMER	G2A362C00001
X3001	VSX0803	CRYSTAL OSCILLATOR	*2,*3,*4,*5
X3002	H0D443400021	CRYSTAL OSCILLATOR	H0D443400020
X6001	H0A120500002	CRYSTAL OSCILLATOR	[MAV]
		MISCELLANEOUS	
	EYF52BC	FUSE HOLDER	
	EYF52BC	FUSE HOLDER	
	VSC5319	HEAT SINK	[MAV] *1,*3,*4
	VMD4258	PHOTO TRANSISTOR HOLDER	[MAV]
	VMD4258	PHOTO TRANSISTOR HOLDER	[MAV]
	VMT1358	SPACER	[MAV] UNDER MAIN LEVER LOCATION

12. SCHEMATIC DIAGRAM FOR PRINTING WITH A4 SIZE



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SJ30AM/EU/PMP,
NV-SJ50AM/AU/EU
FRONT SCHEMATIC DIAGRAM

(S) :TO SYSTEM CONTROL & SERVO SECTION



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

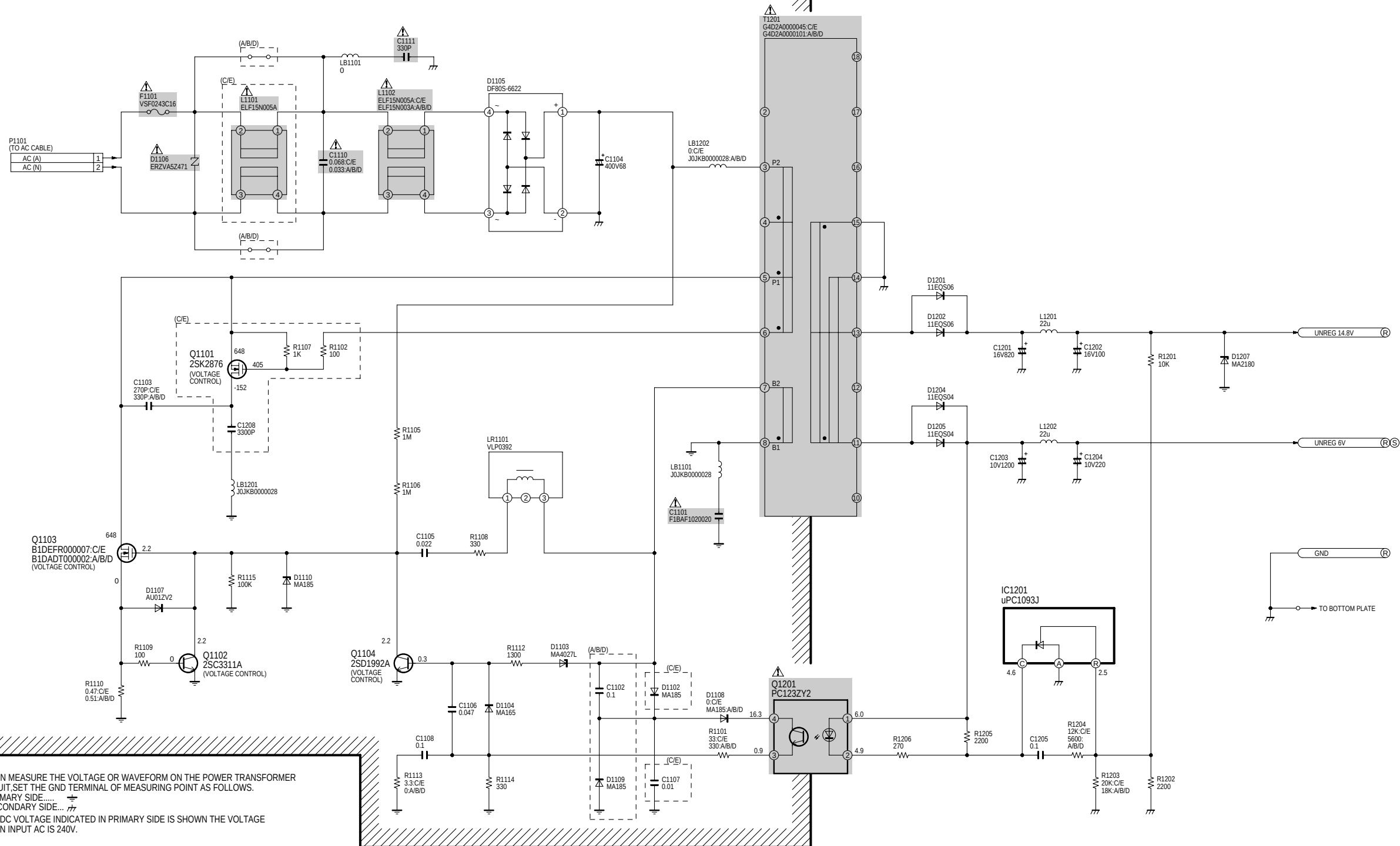
NV-SJ30AM/EU/PMP,
NV-SJ50AM/AU/EU
KEY SWITCH & LED DRIVE
SECTION IN MAIN SCHEMATIC DIAGRAM

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

(R) :TO POWER SUPPLY/RF SECTION
(S) :TO SYSTEM CONTROL & SERVO SECTION

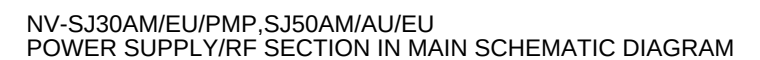
HOT

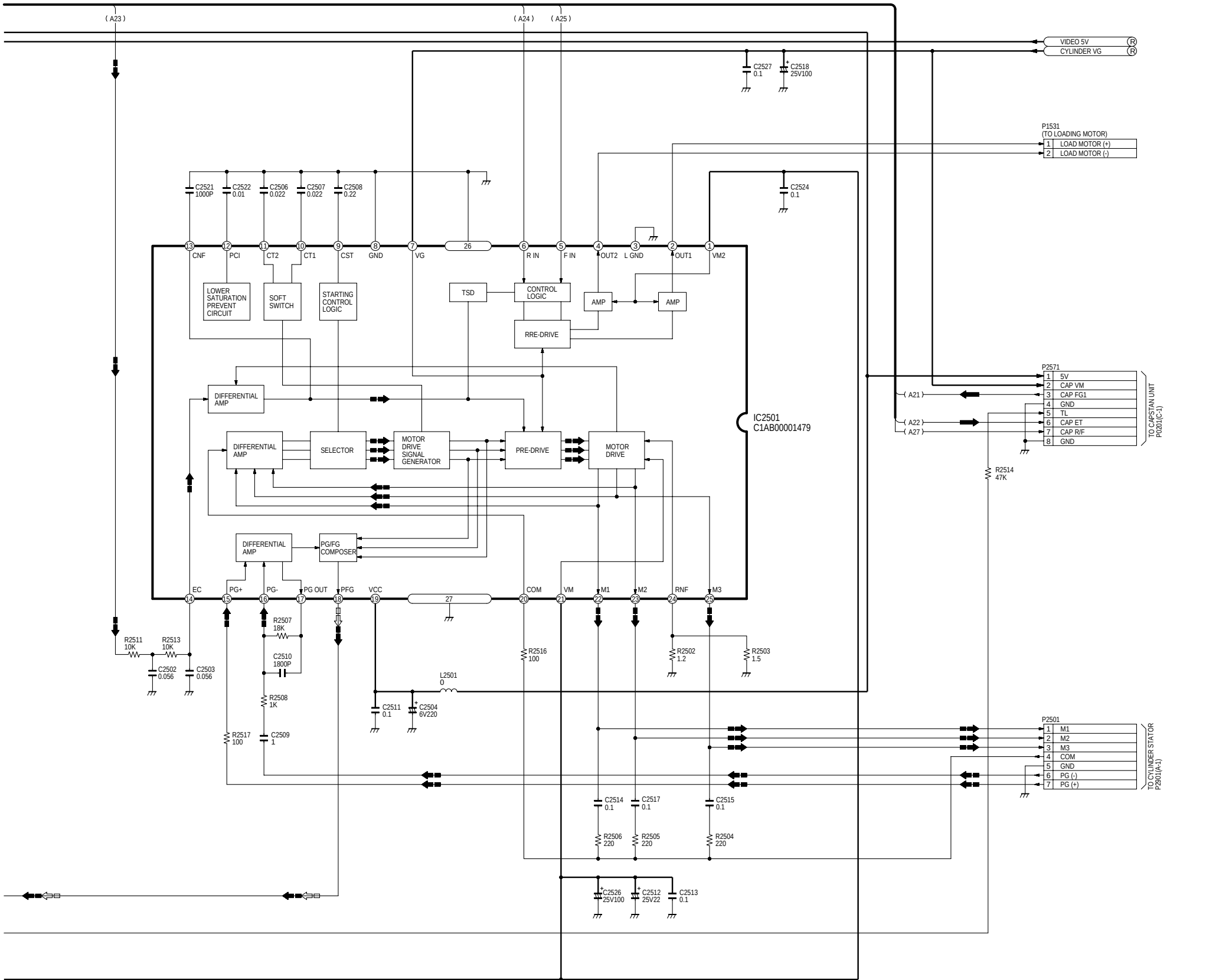


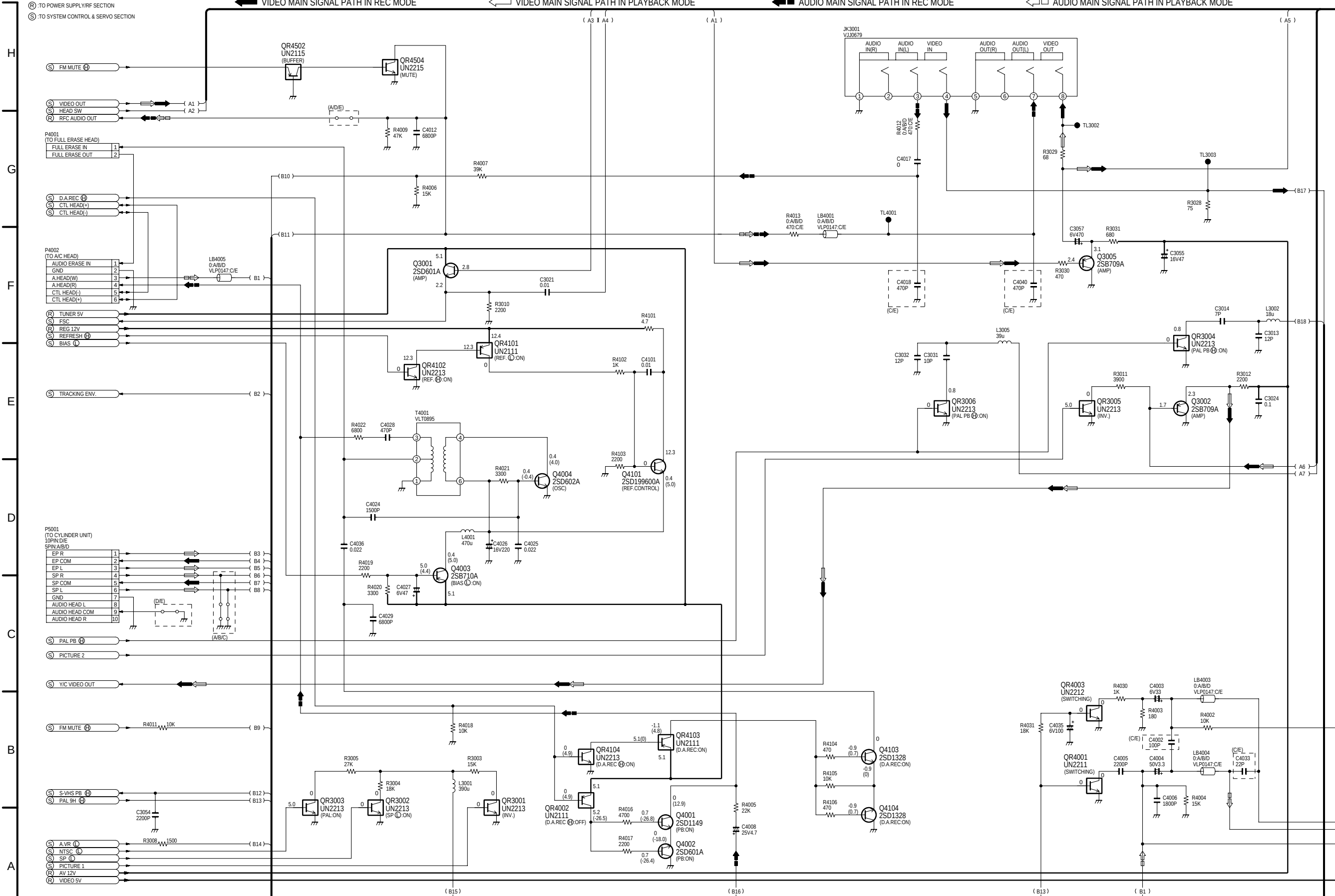
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.

NV-SJ30AM/EU/PMP,SJ50AM/AU/EU
POWER TRANSFORMER SECTION IN MAIN SCHEMATIC DIAGRAM

 **AUDIO MAIN SIGNAL PATH IN REC MODE**
 **AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE**







NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL (SP MODE)

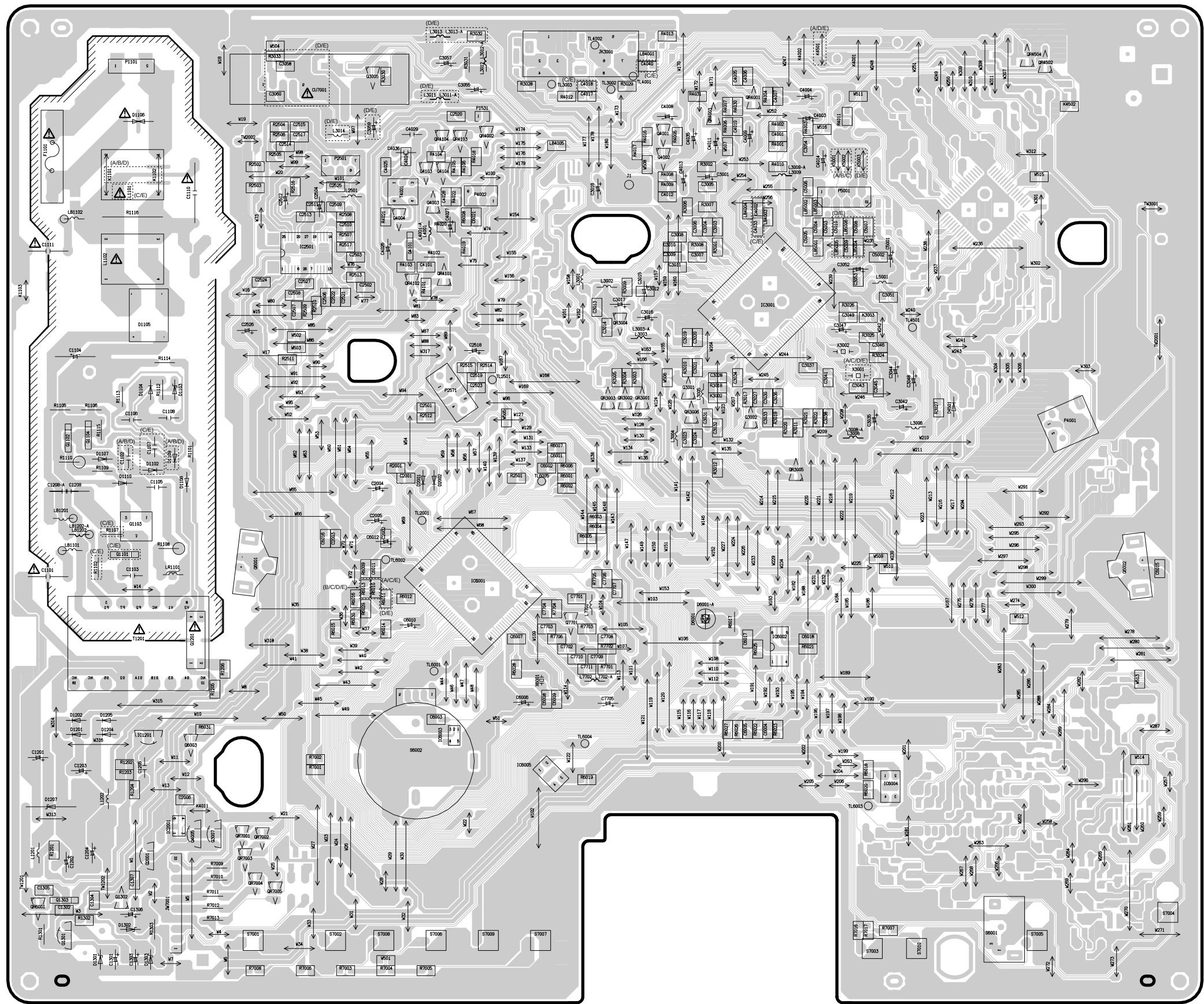
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL (SP MODE)

NV-SJ30AM/EU/PMP, SJ50AM/AU/EU LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



A

3



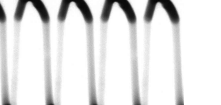
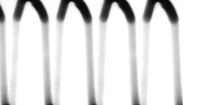
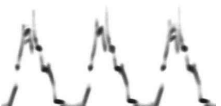
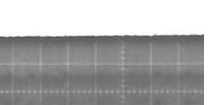
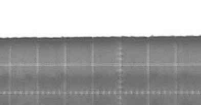
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

MAIN C.B.A.			
Transistor		Integrated Circuit	
Q1102	D1	IC1201	B1
Q1103	C1	IC2001	B2
Q1104	D1	IC2501	E2
Q1201	C2	IC3001	E5
Q1301	A1	IC5501	B6
Q1302	A1	IC5502	D7
Q1303	A1	IC5503	A7
Q2001	A1	IC5504	B7
Q3001	D5	IC5505	E4
Q3002	D5	IC5506	B7
Q3005	F3	IC6001	C3
Q3007	B2	IC6002	C5
Q4001	F4	IC6003	B3
Q4002	E4	IC6004	B6
Q4003	E3	IC6005	B4
Q4004	E3	Test Point	
Q4005	B2	TL2001	C3
Q4101	E3	TL2501	D3
Q4103	E3	TL3002	F4
Q4104	E3	TL3003	F4
Q5501	B6	TL4001	F4
Q5502	A6	TL4002	F4
Q5503	A6	TL4501	D6
Q5504	B7	TL6001	C3
Q5505	B6	TL6002	C3
Q5506	A6	TL6003	B6
Q5507	A7	TL6004	B4
Q5508	A7	TL6005	D4
Q5509	A7	TW1201	A1
Q6001	C2	TW1202	A1
Q6002	C7	TW2001	D7
Q6003	B2	TW2002	F2
Q7701	C4	TW3001	E7
Transistor & Resistor		TW3004	E7
QR3001		Connector	
QR3002		P1101	F1
QR3003		P1531	F3
QR3004		P2501	E3
QR3005		P2571	D3
QR3006		P4001	D7
QR4001		P4002	E3
QR4002		P5001	E5
QR4003			
QR4101			
QR4102			
QR4103			
QR4104			
QR4502			
QR4504			
QR5501			
QR6001			
QR7001			
QR7002			
QR7003			
QR7004			
QR7005			

ADDRESS INFORMATION

				
T1201-3 STOP 3.8Vp-p (2msec.div.)	T1150-5 STOP 480Vp-p (5usec.div.)	T1201-7 STOP 25Vp-p (5usec.div.)	T1201-11 STOP 21Vp-p (5usec.div.)	T1201-13 STOP 48Vp-p (5usec.div.)
				
Q1201-1 STOP 0.4Vp-p (5usec.div.)	IC2501-22,23,25 PLAY 3.2Vp-p (2msec.div.)	IC6001-13 STILL 5.0Vp-p (5msec.div.)	IC6001-18 REC 4.7Vp-p (10msec.div.)	IC6001-50 REC/PLAY 2.0Vp-p (20usec.div.)
				
IC6001-52 REC/PLAY 2.0Vp-p (20usec.div.)	IC6001-68,69 REC 5.0Vp-p (5msec.div.)	IC6001-70 REC 5.0Vp-p (5msec.div.)	IC6001-71 REC 4.8Vp-p (5msec.div.)	IC6001-72 REC 4.8Vp-p (5msec.div.)
				
IC6001-79,80 FF/REW 4.4Vp-p (2msec.div.)	IC6001-90 REC 5.0Vp-p (5msec.div.)	IC6001-94,95 REC 6.0Vp-p (5msec.div.)	IC6001-97 PLAY 4.0Vp-p (5msec.div.)	IC3001-4 REC 1.8Vp-p (10usec.div.)
				
IC3001-11 REC/PLAY 0.4Vp-p (0.5msec.div.)	IC3001-21 REC/PLAY 0.4Vp-p (50usec.div.)	IC3001-30 REC 1.1Vp-p (50usec.div.)	IC3001-52 REC/PLAY 2.1Vp-p (50usec.div.)	IC3001-60 REC/PLAY 0.3Vp-p (20usec.div.)
				
IC3001-62 REC 4.4Vp-p (0.5msec.div.)	IC3001-63 REC 4.4Vp-p (0.5msec.div.)	IC3001-81 REC/PLAY 4.8Vp-p (5msec.div.)	IC3001-87 REC 0.9Vp-p (20usec.div.)	IC3001-88 REC 0.9Vp-p (20usec.div.)
				

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

Ref. No.	IC2001																									
MODE	1	2	3	4	5	6																				
STOP	6.0	0.0	4.9	1.2	0.0	5.0																				
PLAY	6.0	0.0	4.9	1.2	0.0	5.0																				
REC	5.9	0.0	4.9	1.2	0.0	5.0																				
F.F	6.3	0.0	5.0	1.2	0.0	5.0																				
REW	6.3	0.0	5.0	1.2	0.0	5.0																				
Ref. No.	IC2501																									
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
STOP	12.3	0.7	0.0	0.7	0.0	0.0	15.1	0.0	2.8	1.8	1.8	0.7	1.1	2.4	2.5	2.5	2.5	1.3	5.0	3.1						
PLAY	12.3	0.8	0.0	0.7	0.0	0.0	15.0	0.0	2.8	1.8	1.8	0.7	1.2	2.4	2.5	2.5	2.5	1.3	5.0	3.1						
REC	12.2	0.8	0.0	0.8	0.0	0.0	15.0	0.0	2.8	1.8	1.7	0.7	1.2	2.4	2.5	2.5	2.5	1.3	5.0	3.1						
F.F	12.3	0.6	0.0	0.6	0.0	0.0	15.0	0.0	2.8	1.8	1.8	0.7	1.1	2.4	2.5	2.5	2.5	1.3	5.0	2.9						
REW	12.3	0.8	0.0	0.8	0.0	0.0	15.0	0.0	2.8	1.8	1.8	0.7	1.2	2.4	2.5	2.5	2.5	1.3	5.0	3.2						
Ref. No.	IC2501																									
MODE	21	22	23	24	25	26	27																			
STOP	12.3	3.1	3.1	0.0	3.1	0.0	0.0																			
PLAY	12.3	3.1	3.1	0.0	3.1	0.0	0.0																			
REC	12.3	3.1	3.1	0.0	3.1	0.0	0.0																			
F.F	12.3	2.9	2.9	0.0	2.9	0.0	0.0																			
REW	12.3	3.2	3.2	0.1	3.2	0.0	0.0																			
Ref. No.	IC6001																									
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
STOP	5.0	1.4	4.8	3.9	5.0	5.0	4.9	0.0	2.8	0.1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	2.5	0.0	0.0						
PLAY	0.0	0.0	0.0	0.0	0.0	5.0	4.9	0.0	4.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	0.0	2.5	2.5	0.0						
REC	5.0	1.3	4.8	3.9	5.0	5.0	4.8	0.0	0.0	0.1	4.7	0.0	0.0	5.0	0.0	0.0	0.0	2.5	0.0	4.9						
F.F	5.0	1.4	4.8	3.9	5.0	5.0	4.9	0.0	1.2	0.1	4.8	0.0	0.0	5.0	0.0	0.0	0.0	2.5	0.0	0.0						
REW	5.0	1.4	4.9	3.9	5.0	5.0	4.9	0.0	4.0	0.1	4.8	0.0	0.0	4.9	0.0	0.0	0.0	2.5	0.0	0.0						
Ref. No.	IC6001																									
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
STOP	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0	4.2	0.0	5.0	5.0	0.0	5.0	1.5	1.7	5.0	2.2	2.3	0.0						
PLAY	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0	4.1	0.0	5.0	5.0	0.0	5.0	1.5	1.7	5.0	2.2	2.2	0.0						
REC	0.0	0.0	4.9	4.9	0.0	0.0	0.0	5.0	4.1	0.0	4.9	5.0	0.0	5.0	1.5	1.7	5.0	2.2	2.2	0.0						
F.F	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0	4.2	5.0	5.0	0.0	0.0	5.1	1.5	1.7	5.0	2.2	2.3	0.0						
REW	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0	4.2	5.0	5.0	0.0	0.0	5.1	1.5	1.7	5.0	2.2	2.3	0.0						
Ref. No.	IC6001																									
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60						
STOP	0.0	0.1	5.0	4.7	4.7	0.0	1.8	2.2	0.0	2.2	0.0	2.2	5.1	2.1	0.0	1.9	0.0	5.0	0.0	0.0						
PLAY	0.0	0.1	5.0	4.7	4.7	0.0	1.8	2.2	0.0	0.0	0.0	2.2	5.0	2.1	0.0	1.9	0.0	5.0	5.0	0.0						
REC	0.0	0.1	5.0	5.0	5.0	0.0	1.8	2.2	0.0	2.2	0.0	2.2	4.9	2.1	0.0	1.9	0.0	5.0	5.0	0.0						
F.F	0.0	0.1	5.0	4.7	4.7	0.0	1.8	2.2	0.0	2.2	0.0	2.2	5.1	2.1	0.0	1.9	0.0	5.0	3.8	0.0						
REW	0.0	0.1	5.0	4.7	4.7	0.0	1.8	2.2	0.0	2.2	0.0	2.2	5.1	2.1	0.0	1.9	0.0	5.0	3.8	0.0						
Ref. No.	IC6001																									
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80						
STOP	0.0	0.0	5.0	0.0	5.0	0.0	0.0	0.1	5.0	5.0	4.0	3.9	2.5	0.0	0.0	0.0	2.4	0.0	0.1	5.0						
PLAY	0.0	0.0	4.9	0.0	4.9	0.0	0.0	0.1	5.0	5.0	4.0	3.9	2.5	0.0	4.8	2.5	2.4	0.0	5.0	4.2						
REC	0.0	0.0	5.0	0.0	5.0	0.0	0.0	0.1	5.0	5.0	5.0	5.0	5.0	0.0	4.8	0.0	5.0	5.0	5.0	5.0						
F.F	0.0	0.0	5.0	0.0	3.8	0.0	0.0	0.1	5.0	5.0	4.0	4.0	2.5	0.0	2.8	2.7	2.4	3.4	2.0	2.5						
REW	0.0	0.0	5.0	0.0	3.8	0.0	0.0	0.1	5.0	5.0	4.0	3.9	2.5	5.0	3.4	2.9	2.3	3.8	2.5	2.5						
Ref. No.	IC6001																									
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100						
STOP	5.0	0.0	5.0	0.0	0.0	2.5	2.5	0.0	4.3	1.3	2.5	2.5	0.0	2.5	2.5	2.5	2.5	5.0	5.0	5.0						
PLAY	4.9	0.0	4.9	0.0	0.0	2.5	2.5	0.0	4.3	1.3	2.5	2.5	0.0	2.5	2.5	2.5	2.5	5.0	5.0	5.0						
REC	0.1	0.0	5.0	0.0	0.0	2.5	2.5	0.0	4.2	2.5	2.5	2.5	0.0	3.6	1.3	2.5	2.5	5.0	5.0	5.0						
F.F	5.0	0.0	5.0	1.7	0.0	2.5	2.5	0.0	4.3	1.3	2.5	2.5	0.0	2.5	2.5	2.5	2.7	5.1	5.1	5.1						
REW	5.0	3.8	5.0	0.0	0.0	2.5	2.5	0.0	4.3	1.3	2.5	2.5	0.0	2.5	2.5	2.5	2.7	5.1	5.1	5.1						
Ref. No.	IC6002											IC6003										IC6004				
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5			1	3	4	5						
STOP	0.0	5.0	0.4	5.0	0.0	0.0	-	5.0		5.0	5.0	0.0	-	-			1.2	2.4	0.2	0.0						
PLAY	0.0	5.0	0.4	5.0	0.0	0.0	-	5.0		5.0	5.0	0.0	-	-			1.2	2.4	5.0	0.0						
REC	0.0	5.0	0.4	5.0	0.0	0.0	-	5.0		5.0	5.0	0.0	-	-			1.2	2.4	4.9	0.0						
F.F	0.0	5.0	0.4	5.0	0.0	0.0	-	5.0		5.0	5.0	0.0	-	-			1.2	2.4	2.2	0.0						
REW	0.0	5.0	0.4	5.0	0.0	0.0	-	5.0		5.0	5.1	0.0	-	-			1.2	2.4	2.2	0.0						
Ref. No.	IC6005																									
MODE	1	2	3	4																						
STOP	0.0	1.2	5.0	0.0																						
PLAY	0.0	1.2	4.0	0.0																						
REC	0.0	1.2	3.9	0.0																						
F.F	0.0	1.2	2.3	0.0																						
REW	0.0	1.2	2.5	0.0																						

Ref No	O6001	O6002	O7701

[illegible]

443NT [L]	4.43 NTSC ①	BIL	BILINGUAL
A. COMP	AUDIO COMPONENT SIGNAL	BIL [L]	BILINGUAL ①
A. COMPO	AUDIO COMPONENT SIGNAL	BIL. [H]	BILINGUAL ②
A. D.P [L]	AUDIO DUBBING PAUSE ①	BIL/M1 [L]	BILINGUAL ①
A. D/L [L]	AUDIO DUBBING PAUSE ①	BS CLOCK	BS CLOCK
A. DEF [S]	AUDIO DEFEAT	BS DATA	BS DATA
A. DEF [S] [L]	AUDIO DEFEAT	BS LCH IN	BS L CHANNEL INPUT
A. DUB P [L]	AUDIO DUBBING PAUSE ①	BS MIX [H]	BS MIX ②
A. DUB [H]	AUDIO DUBBING ②	BS MON [H]	BS MONITOR ②
A. ERASE	AUDIO ERASE	BS MONI [H]	BS MONITOR ②
A. H. SW	AUDIO HEAD SWITCHING PULSE	BS RCH IN	BS R CHANNEL INPUT
A. HEAD [R]	AUDIO HEAD (REC)	BS VIDEO	BS VIDEO SIGNAL
A. HEAD [W]	AUDIO HEAD (PLAY)	BS VIDEO/BS1	BS VIDEO SIGNAL
A. IN [L]	AUDIO INPUT (L)	BS [H]	BS ②
A. IN [R]	AUDIO INPUT (R)	BS. LEVEL	BS LEVEL
A. MUT [H]	AUDIO MUTE ②	BS. M [H]	BS MONITOR ②
A. MUTE [H]	AUDIO MUTE ②	BS/VTR [H]	BS/VTR ②
A. OUT [L]	AUDIO OUTPUT (L)	BUS CLK	BUS CLOCK
A. OUT [R]	AUDIO OUTPUT (R)	BUS LSN	BUS LISTEN
A. RF OUT	AUDIO RF SIGNAL OUTPUT	BUS TLK	BUS TALK
A/VS/S. DATA	AV SW/SERIAL DATA	BUZZER	BUZZER
AC ONLINE	AC ONLINE	CAP EC	CAPSTAN TORQUE CONTROL
AC. O/EE. H	AC ONLINE/EE ②	CAP M GND	CAPSTAN MOTOR GND
AFC S C	AFC S CURVE	CAP. ET	CAPSTAN TORQUE CONTROL
AFC [S]	AFC S CURVE	CAP. FG1	CAPSTAN FG1 PULSE
AFC. DEF	AFC DEFEAT	CAP. FG2	CAPSTAN FG2 PULSE
ARFC OUT	AUDIO RF SIGNAL OUTPUT	CAS. SW	CASSETTE SW
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL	CCN	PLAYBACK CONTROL SIGNAL (-)
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI	CCP	PLAYBACK CONTROL SIGNAL (+)
	ARTIFICIAL VERTICAL SYNC SIGNAL ②/NORMAL	CHM	CONTROL SIGNAL (+)
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL ②/NORMAL	CHP	CONTROL SIGNAL (-)
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL	CINEM [L]	CINEMA ①
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE	CINEMA [L]	CINEMA ①
AUDIO IN [L]	AUDIO INPUT (L)	CINEMA/MIX	CINEMA/MIX
AUDIO IN [R]	AUDIO INPUT (R)	CKL	RATCH LOCK
AUDIO OUT [L]	AUDIO OUTPUT (L)	CKS	SHIFT LOCK
AUDIO OUT [R]	AUDIO OUTPUT (R)	CL	CLOCK
AUDIO SELECT [H]	AUDIO SELECT ②	CLK	CLOCK
AUDIO. L	AUDIO (L)	CLK (C.G)	CLOCK
AUDIO. R	AUDIO (R)	CLOCK. IN	CLOCK INPUT
AV CNT	AV CONTROL	CLP	CLAMP
AV CTL	AV CONTROL	COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK	COLOR [H]	COLOUR ②
AV. C.M.	AV CONTROL MODE	CONV	CONVERTOR
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)	CS	CHIP SELECT
AVSW/METER. L	AV SW/LEVEL METER (L)	CTL GND	CONTROL GND
B MODE. H	B MODE ②	CTL HEAD [+]	CONTROL HEAD (+)
B.G.P	BURST GATE PULSE	CTL HEAD [-]	CONTROL HEAD (-)
BACKUP 5V	BACK UP 5V	CTL [+]	CONTROL HEAD (+)
BAND. U.E.	BAND U	CTL [-]	CONTROL HEAD (-)
BANDVL. D	BAND VL	CUE BIAS	CUE BIAS
BI/MI [L]	BILINGUAL/MIX ①	CURRENT LIM	CURRENT LIMMITER
		CYL ET	CYLINDER TORQUE CONTROL

CYL GND	CYLINDER GND	FULL. E. 12V	FULL ERASE 12V
D.F.M. REC [H]	DELAIED FM RECORDING Ⓜ	GND [A]	GND (ANALOG)
D. FM REC [L]	DELAIED FM RECORDING Ⓛ	GND [TU]	GND (TUNER)
D. GND	DIGITAL GND	GND/N. SW. 12V	GND/NON SW 12V
D. REC [H]	DELAYED RECORDING Ⓜ	H. SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING Ⓜ	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEAD PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓜ	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [-]	HEATER (-)
EC	ERROR TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL	HTR [+]	HEATER (+)
	REFERENCE VOLTAGE	HTR [-]	HEATER (-)
EDT TRIG [L]	EDIT TRIGGER Ⓛ	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT Ⓜ	ICL	CONTROL AGC CIRCUIT
EE [H]	EE Ⓜ	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE Ⓜ/INSERT Ⓜ	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch Ⓛ
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT Ⓜ
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP Ⓜ	INSERT [H]	INSERT Ⓜ
EP/LP [H]	LP Ⓜ	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP Ⓜ	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB Ⓜ
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMENT	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓜ	L. CH [H]	Lch Ⓜ
FLY ON [H]	FLYING ERASE HEAD ON Ⓜ	L. CH [L]	Lch Ⓛ
FLY. E [H]	FLYING ERASE HEAD ON Ⓜ	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE Ⓜ	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE Ⓜ	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON Ⓜ	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON Ⓜ	LINE IN [L]	LINE INPUT (L)

LINE IN [R]	LINE INPUT (R)	P-OFF [H]	POWER OFF Ⓜ
LINE OUT [L]	LINE OUTPUT (L)	P-OFF [L]	POWER OFF Ⓛ
LINE OUT [R]	LINE OUTPUT (R)	P. FAIL	POWER FAILURE DETECT
LP [H]	LP Ⓜ	P. OFF [H]	POWER OFF Ⓜ
LPTRI [L]	LP TRICK PLAY Ⓛ	P. OFF [L]	POWER OFF Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING	PAL [H]	PAL Ⓜ
M GND	MOTOR GND	PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓜ
M REG	MOTOR REGULATOR	PB ADJ OUT	PLAYBACK ADJUST OUTPUT
MAIN OUT	MAIN OUTPUT	PB OUT	PLAYBACK OUTPUT
MAIN [L]	MAIN Ⓛ	PB. H	PLAYBACK Ⓜ
MAIN/MONO	MAIN/MONAUURAL	PFG	PG/FG
MAX IN	MAXIMAM INPUT	PHOTSN +B	PHOTO SENSOR +B
MES [H]	MESECAM Ⓜ	PICT. CNT	PICTURE CONTROL
MESE [H]	MESECAM Ⓜ	PLAY LED/RVS LED	PLAY LED/REVERSE LED
MESE [L]	MESECAM Ⓛ	PLAY. PO	PLAY POSITION
METER 5V	LEVEL METER 5V	PLAY/R. LED	PLAY LED/REVERSE LED
METER [L]	LEVEL METER (L)	PLY/DEW	PLAY/DEW Ⓜ
METER [R]	LEVEL METER (R)	POWER OFF [L]	POWER OFF Ⓛ
METER. L/AVS	LEVEL METER (L)	PREROLL [H]	PREROLL Ⓜ
METER. R/AVC	LEVEL METER (R)	PWRFAIL	POWER FAILURE DETECT
MI/BI [L]	MIX Ⓜ/BILIGUAL	R. CH [H]	Rch Ⓜ
MIC GND	MIC GND	R. CH [L]	Rch Ⓛ
MIC IN	MIC INPUT	R. ST	RESET
MIC IN [L]	MIC INPUT (L)	R/S/F	REVERSE Ⓜ/STOP Ⓜ/FORWARD Ⓛ
MIC IN [R]	MIC INPUT (R)	RCH [H]	Rch Ⓜ
MIC [H]	MIC Ⓜ	REC 12V	RECORDING 12V
MIX [H]	MIX Ⓜ	REC CHROMA	RECORDING CHROMINANCE SIGNAL
MIX [H]/CINEMA [L]	MIX Ⓜ/CINEMA SOUND Ⓛ	REC H	RECORDING Ⓜ
MIX/CINE	MIX Ⓜ/CINEMA SOUND Ⓛ	REC IN	RECORDING INPUT
MIX/CINEMA [L]	MIX Ⓜ/CINEMA SOUND Ⓛ	REC OUT [L]	RECORDING OUTPUT Ⓛ
MN. H/M. L	MONAURAL Ⓜ/MAIN Ⓛ	REC START	RECORDING START
MN. H/MAI. L	MONAURAL Ⓜ/MAIN Ⓛ	REC VR [C]	RECORDING VOLUME (COMMON)
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ	REC VR [L]	RECORDING VOLUME (L)
MODE SEL	AUDIO MODE SELECT	REC VR [R]	RECORDING VOLUME (R)
MODE SW	AUDIO MODE SW	REC Y	RECORDING LUMINANCE SIGNAL
MODE. S. IN	AUDIO MODE SELECT INPUT	REC [H]	RECORDING Ⓜ
MODE. S. OUT	AUDIO MODE SELECT OUTPUT	REC. C	RECORDING CHROMINANCE SIGNAL
MONO [H]	MONAURAL Ⓜ	REC. Y	RECORDING LUMINANCE SIGNAL
MONO [H]/MAIN [L]	MONAURAL Ⓜ/MAIN Ⓛ	REC/EE CTL	RECORDING/EE CONTROL
MONO2 [L]	MONAURAL 2	REEL-T	REEL PULSE (TAKE-UP)
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)	REEL-S	REEL PULSE (SUPPLY)
MOTOR GND	MOTOR GND	REGULATOR FILTER	REGULATOR FILTER
MUTE	MUTE	RESET	RESET
N. A. REC [L]	NORMAL AUDIO RECORDING	REV M F/R	REVIEW MOTOR
N. SW 12V	NON SW 12V		FORWARD/REVERSE
N. SW. 5. DET	NON SW 5V DETECT	REV M V1	REVIEW MOTOR V1
NICAM	NICAM	REV M V2	REVIEW MOTOR V2
NICAM [L]	NICAM Ⓛ	REV MOTOR F/R	REVIEW MOTOR
NOL [H]	PAL Ⓜ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ		FORWARD/REVERSE
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓜ	REV MOTOR V1	REVIEW MOTOR V1
NORMAL [H]	NORMAL Ⓜ	REV MOTOR V2	REVIEW MOTOR V2
NR BIAS	NR BIAS	REV MOTOR [+]	REVIEW MOTOR (+)
NTSC [L]	NTSC Ⓛ	REV MOTOR [-]	REVIEW MOTOR (+)
OCH	CONTROL AGC CIRCUIT	REV. M. GND	REVIEW MOTOR GND
OUT	OUTPUT	RF. CHROMA	RF CHROMINANCE SIGNAL

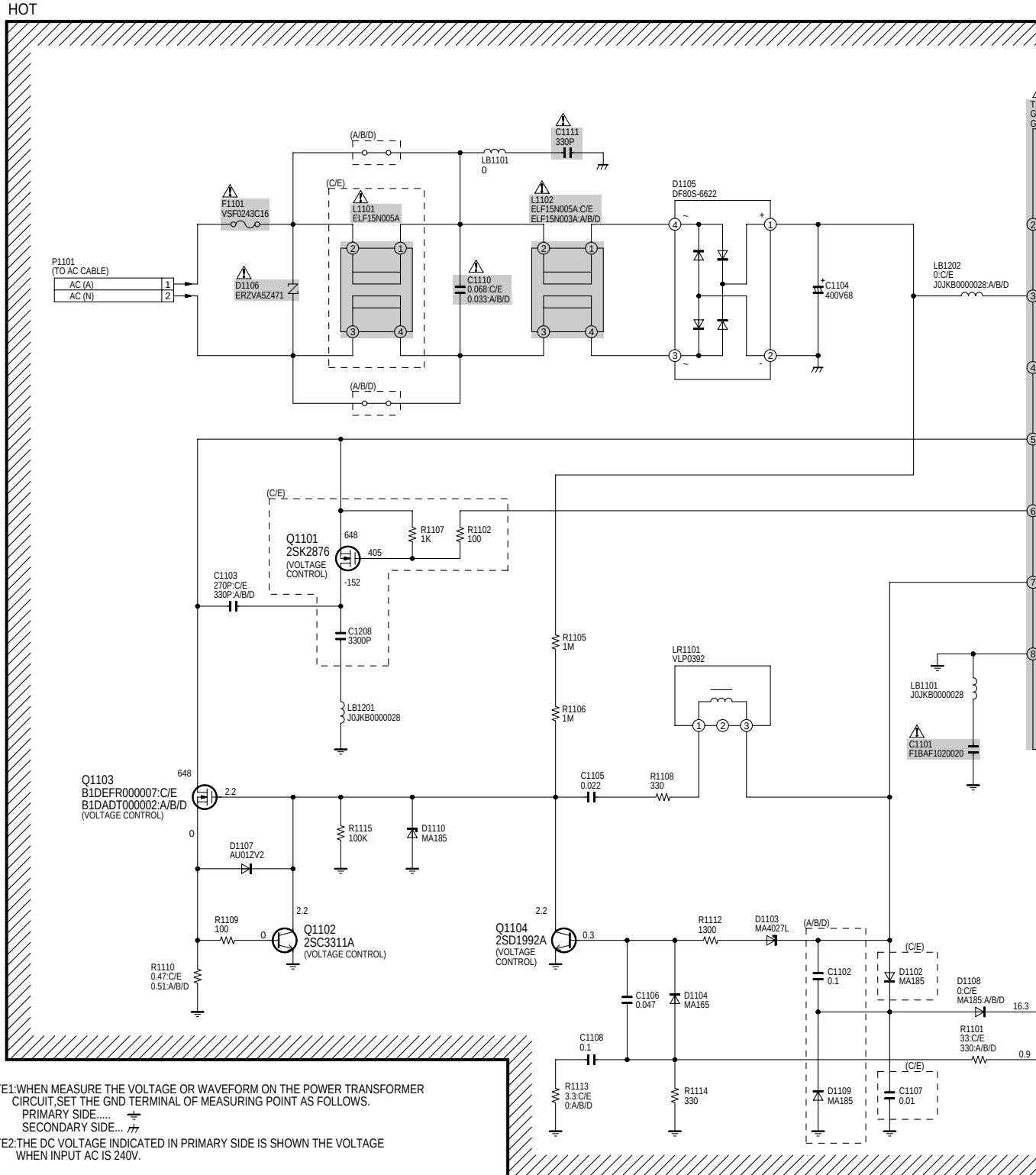
RF OUT	RF OUTPUT	SYSCON 5V	SYSTEM CONTROL 5V
RF Y	RF LUMINANCE SIGNAL	SYSTEM	SYSTEM SW
RF. Y. IN	RF LUMINANCE SIGNAL INPUT	T-PHOTO	TAKE-UP PHOTO TRANSISTOR
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT	T-RL. PLS	TAKE-UP REEL PULSE
ROTAR. SW	ROTARY SW	T. BUSCLK	TIMER BUS CLOCK
ROTARY	ROTARY SW	T. BUSLSN	TIMER BUS LISTEN
RST	RESET	T. BUSTLK	TIMER BUS TALK
RST [L]	RESET ①	T. END [L]	TAPE END ①
Rch/INST	Rch/INSERT	T. PHOTO	TAKE-UP PHOTO TRANSISTOR
S IN	SERIAL DATA INPUT	TAPE END [L]	TAPE END ①
S OUT	SERIAL DATA OUTPUT	TAPE END [L]/CAM	TAPE END ①/CAMERA PAUSE
S-PHOTO	SUPPLY PHOTO TRANSISTOR	TEST	TEST MODE
S-RL. PLS	SUPPLY REEL PULSE	TPZ	TRAPEZOIDAL WAVE CIRCUIT
S. CLK	SERIAL CLOCK	TRIC [L]	TRIC PLAY ①
S. CLK/AV	SERIAL CLOCK/AV	TRICK [L]	TRIC PLAY ①
S. DATA	SERIAL DATA	TRK. ENV	AUTO TRACKING ENVELOPE DETECT
S. DATA/A	SERIAL DATA	TU. AUDIO	TUNER AUDIO
S. PHOTO	SUPPLY PHOTO TRANSISTOR	TU. GND	TUNER GND
S. TAB [L]	SAFETY TAB SW ON ①	TU. V. IN	TUNER VIDEO SIGNAL INPUT
S/P/N	SECAM/PAL/NTSC	TU. VIDEO	TUNER VIDEO
SC IN	SERIAL CLOCK INPUT	TUN NOR IN	TUNER NORMAL INPUT
SC OUT	SERIAL CLOCK OUTPUT	TUN R	TUNER AUDIO (R)
SCK SELECT	SERIAL CLOCK SELECT	TUN. AUDIO IN	TUNER AUDIO INPUT
SEL OUT [L]	SELECT OUTPUT (L)	TUNER 12V	TUNER 12V
SEL OUT [R]	SELECT OUTPUT (R)	TUNER L	TUNER AUDIO (L)
SHUTTLE 1	SHUTTLE 1	TUNER V IN	TUNER VIDEO SIGNAL INPUT
SIF	SOUND INTERMEDIATE FREQUENCY	TUNER [L]	TUNER AUDIO (L)
SLMUT [H]	INPUT SELECT MUTE ①	TUNER [N]	TUNER AUDIO (NORMAL)
SLNID [+]	SOLENOID (+)	TUNER [R]	TUNER AUDIO (R)
SLNID [-]	SOLENOID (-)	TUNER. 12	TUNER 12V
SLW TR. MM	SLOW TRACKING MONO MULTI	TUOFF [H]	TUNER OFF ①
SLW TR. REF	SLOW TRACKING REFERENCE	TV. AUDIO	TV AUDIO
	VOLTAGE	TV/VTR	TV/VTR
SNS. GND	SENSOR GND	TXTON [L]	TEXT ON ①
SOFT [H]	SOFT TAPE PLAY ①	U. REG45V	UNREGULATOR 45V
SOFT [H]/NORMAL	SOFT TAPE PLAY ①/NORMAL ①	UNREG	UNREGULATOR
SOLENOID ON [L]	SOLENOID ON ①	UNREG19V	UNREGULATOR 19V
SP [H]	SP ①	V. REF	REFERENCE VOLTAGE
SP/L/SLP	SP/LP	V. EE [H]	VIDEO EE ①
SSS [L]	SLOW/STILL/STOP	V. EE [L]	VIDEO EE ①
STEREO LED	STEREO LED	VCO REF	REFERENCE OSCILLATER
STEREO [H]	STEREO ①	VD. IN	VIDEO SIGNAL INPUT
STEREO [L]	STEREO ①	VD. OUT	VIDEO SIGNAL OUTPUT
STOP. PO	STOP POSITION	VIDEO EE [L]	VIDEO EE ①
STOP/5V	STOP POSITION/5V	VIDEO IN	VIDEO SIGNAL INPUT
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT	VIDEO OUT	VIDEO SIGNAL OUTPUT
STOP1/PAL:ST	STOP1 POSITION/PAL	VM	MOTOR VOLTAGE
STOP2. PO	STOP 2 POSITION	VM DOWN [L]	MOTOR VOLTAGE DOWN ①
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW	VSS	VERTICAL SYNC SIGNAL
STREO [H]	STEREO ①	VTR [H]	VTR ①
SUB BIAS	SUB BIAS	VTR. 12V	VTR 12V
SUB. SW	SUB SW	X IN	OSCILLATOR INPUT
SVHS CAS [L]	S-VHS CASSETTE ①	X OUT	OSCILLATOR OUTPUT
SW. 5. DET	SW 5V DETECT		
SYNC [L]	SYNC ①		

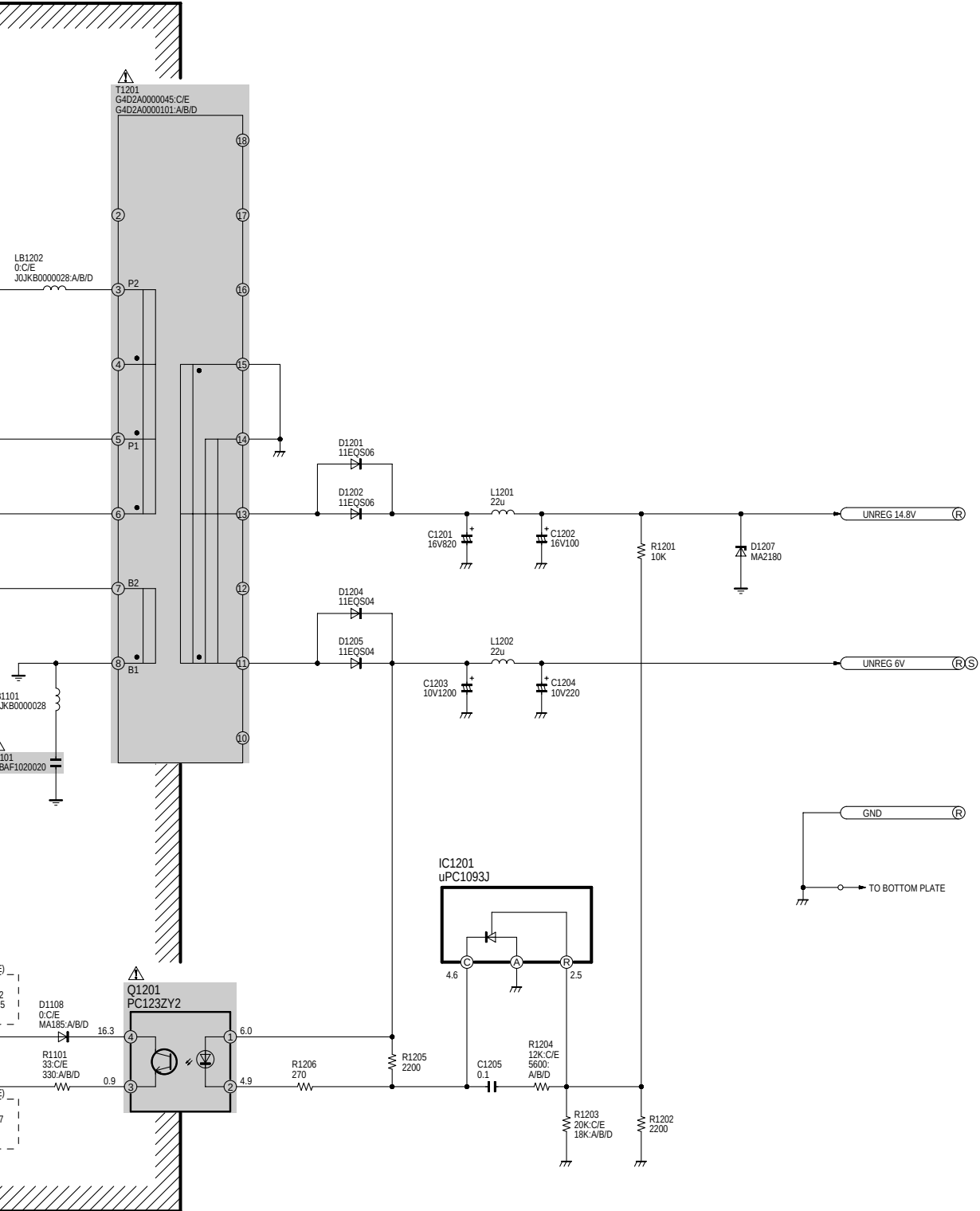
8 SCHEMATIC DIAGRAMS

8.1. POWER TRANSFORMER SECTION IN MAIN SCHEMATIC DIAGRAM

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

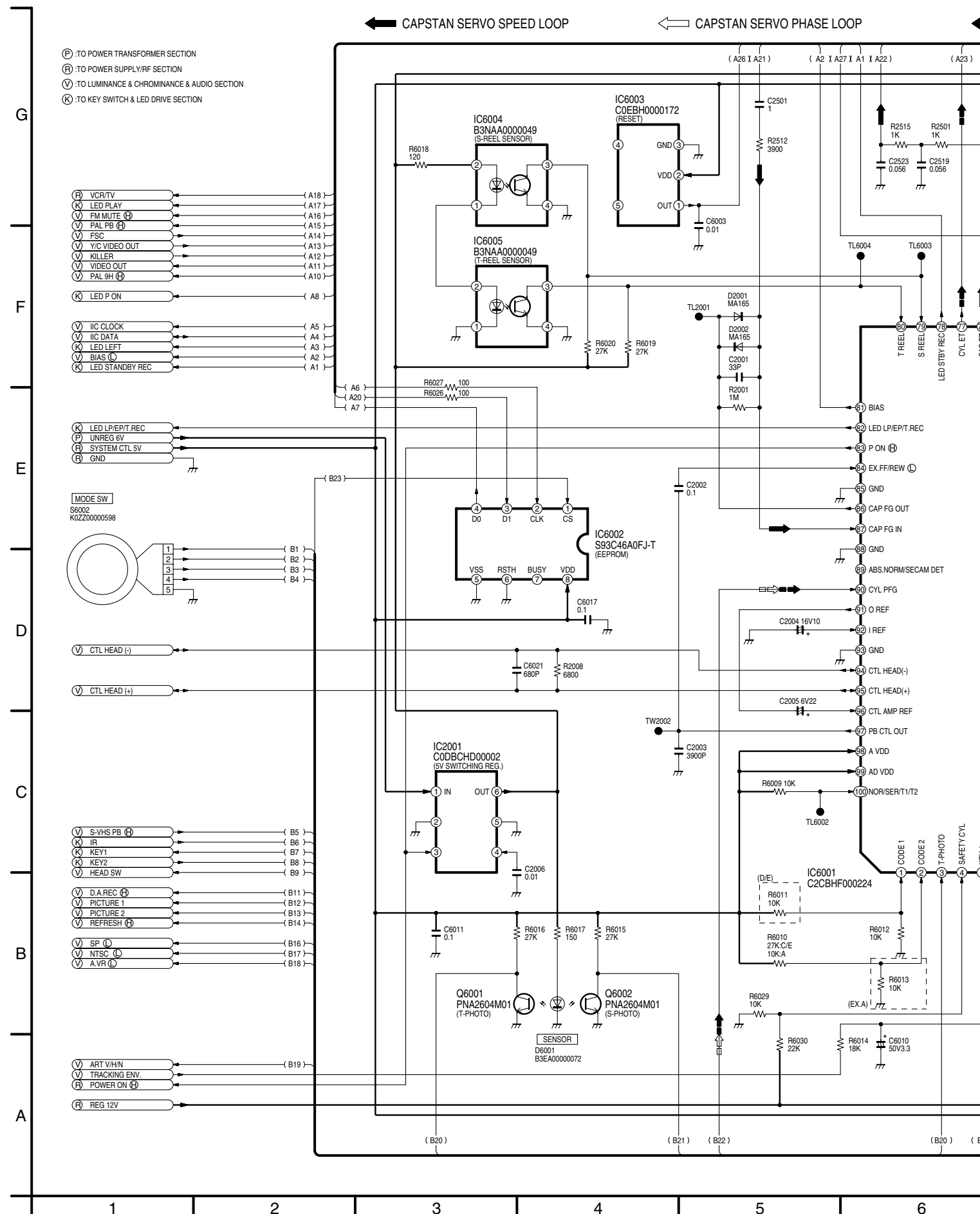


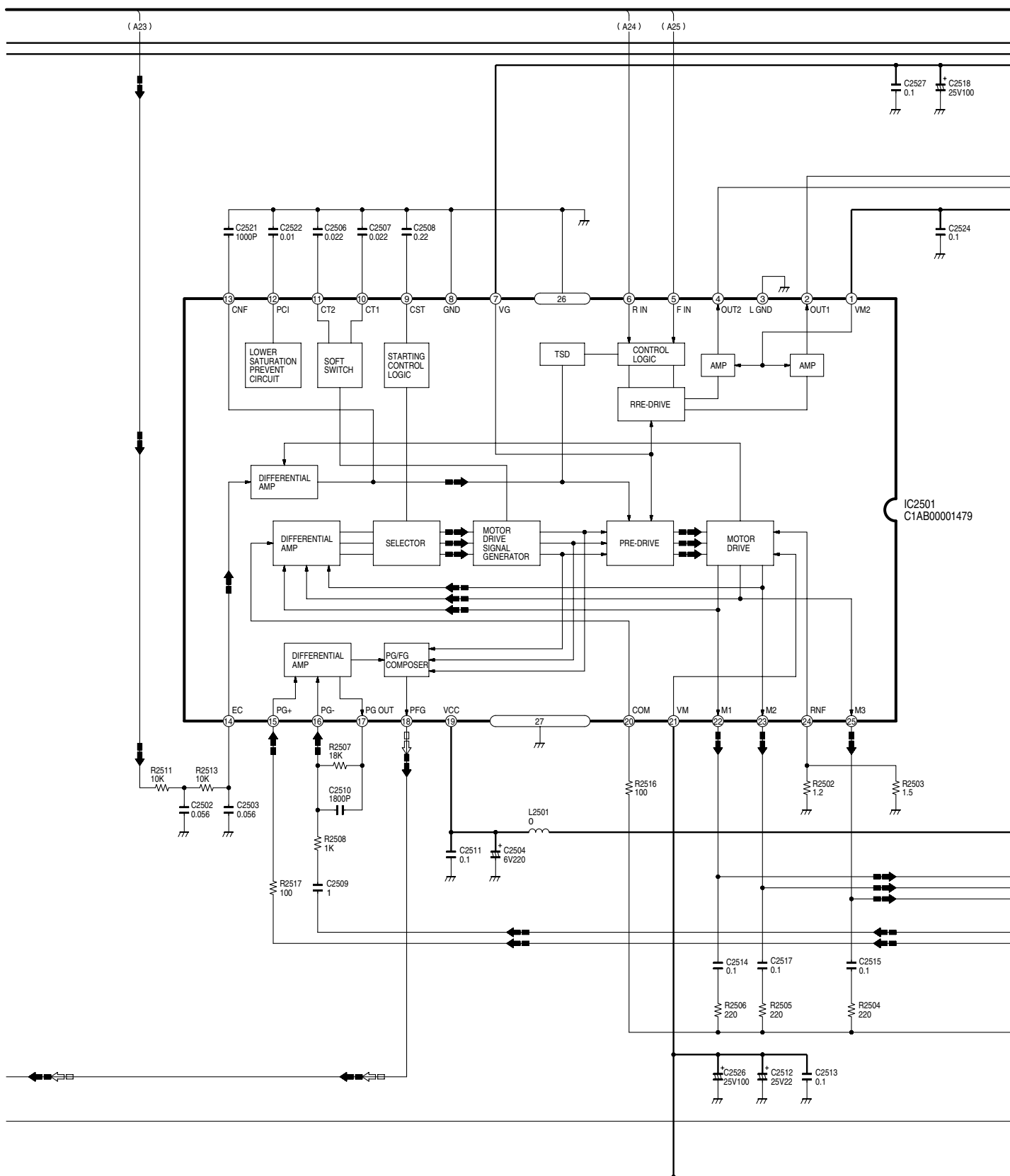


NV-SJ30AM/EU/PMP, SJ50AM/AU/EU
 POWER TRANSFORMER SECTION IN MAIN SCHEMATIC DIAGRAM

6 7 8 9 10

8.2. SYSTEM CONTROL & SERVO IN MAIN SCHEMATIC DIAGRAM





NV-SJ30AM/EU/PMP, SJ50AM/AU/EU
SYSTEM CONTROL & SERVO SECTION
IN MAIN SCHEMATIC DIAGRAM

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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14

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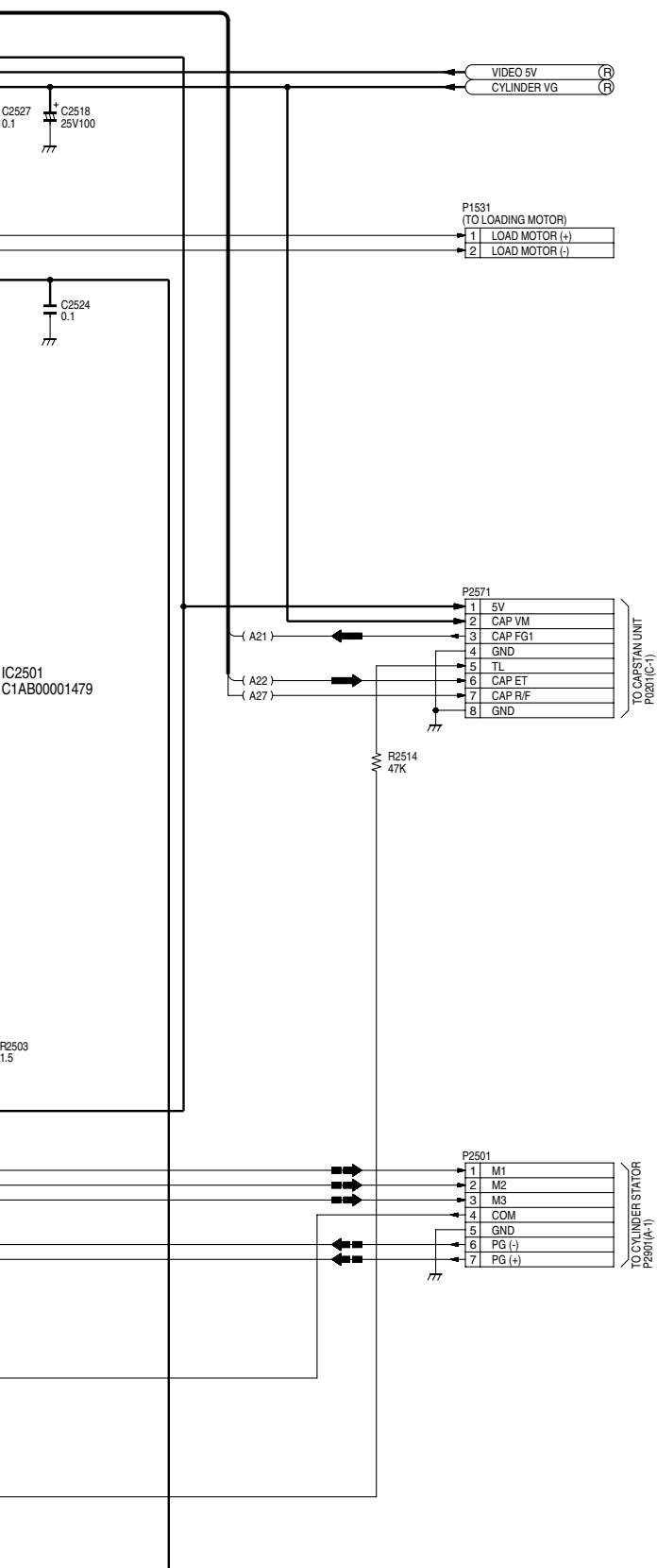
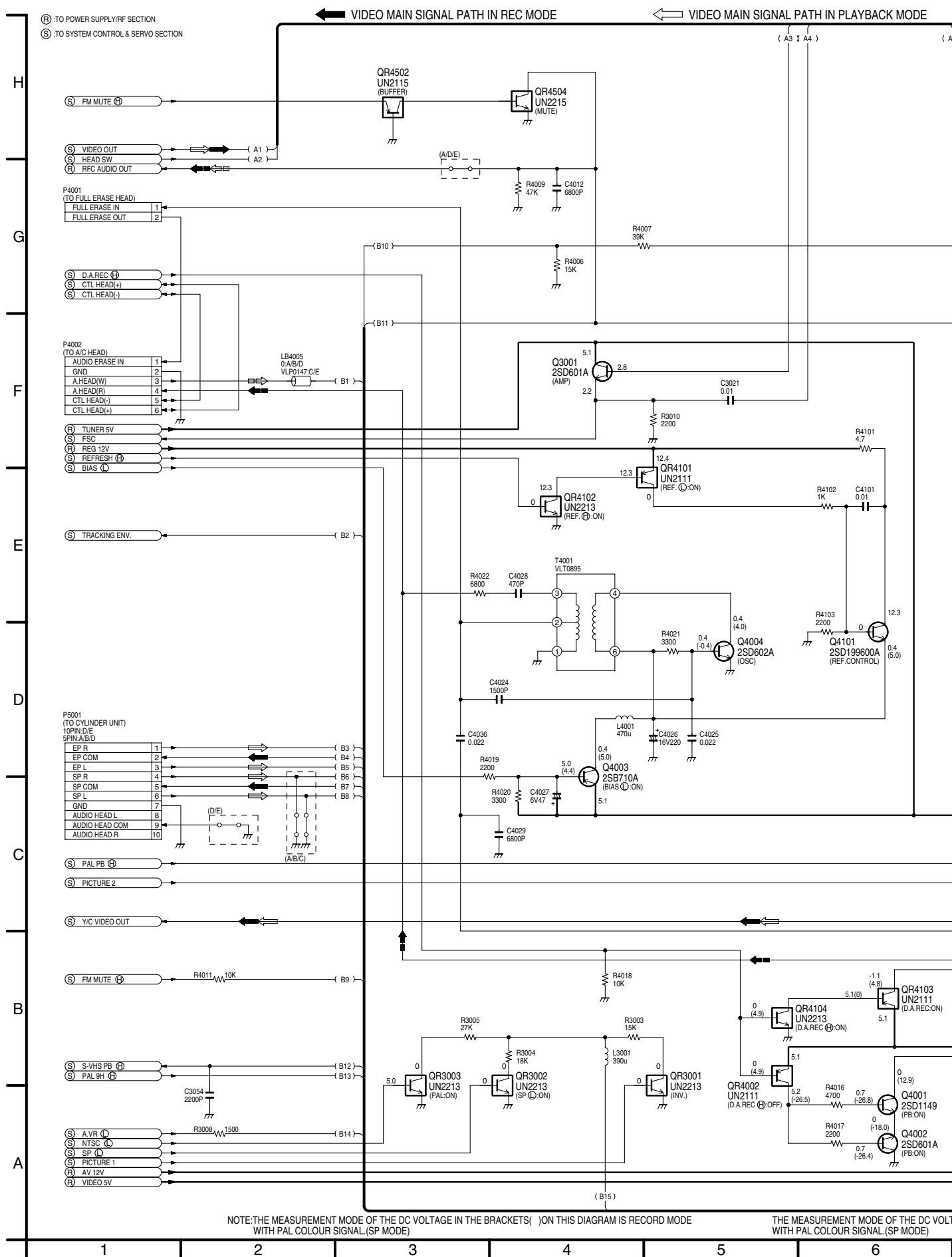


DIAGRAM FOR
S LIST.

NV-SJ30AM/EU/PMP, SJ50AM/AU/EU
SYSTEM CONTROL & SERVO SECTION
IN MAIN SCHEMATIC DIAGRAM

17 18 19

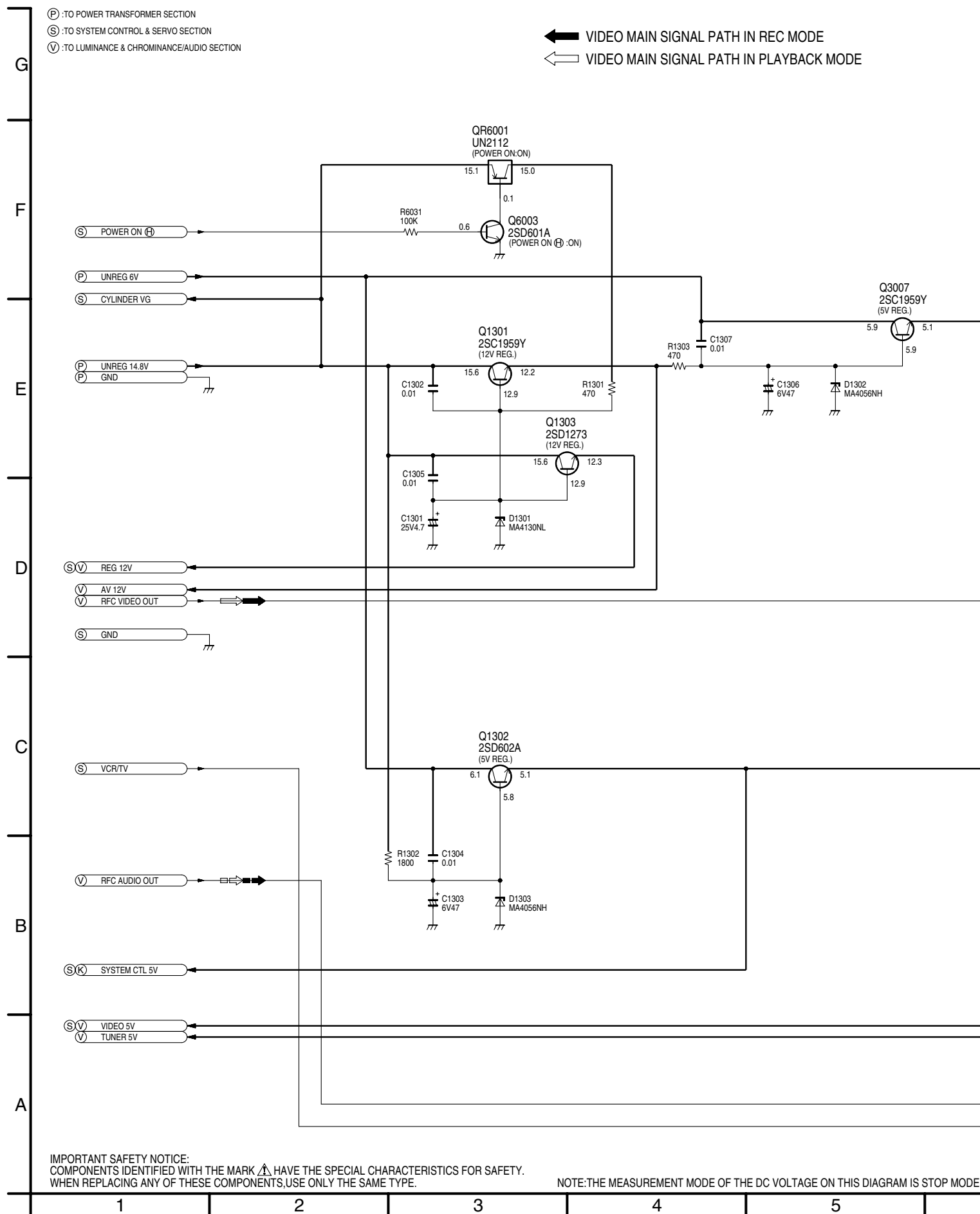
8.3. LUMINANCE & CHROMINANCE/ AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



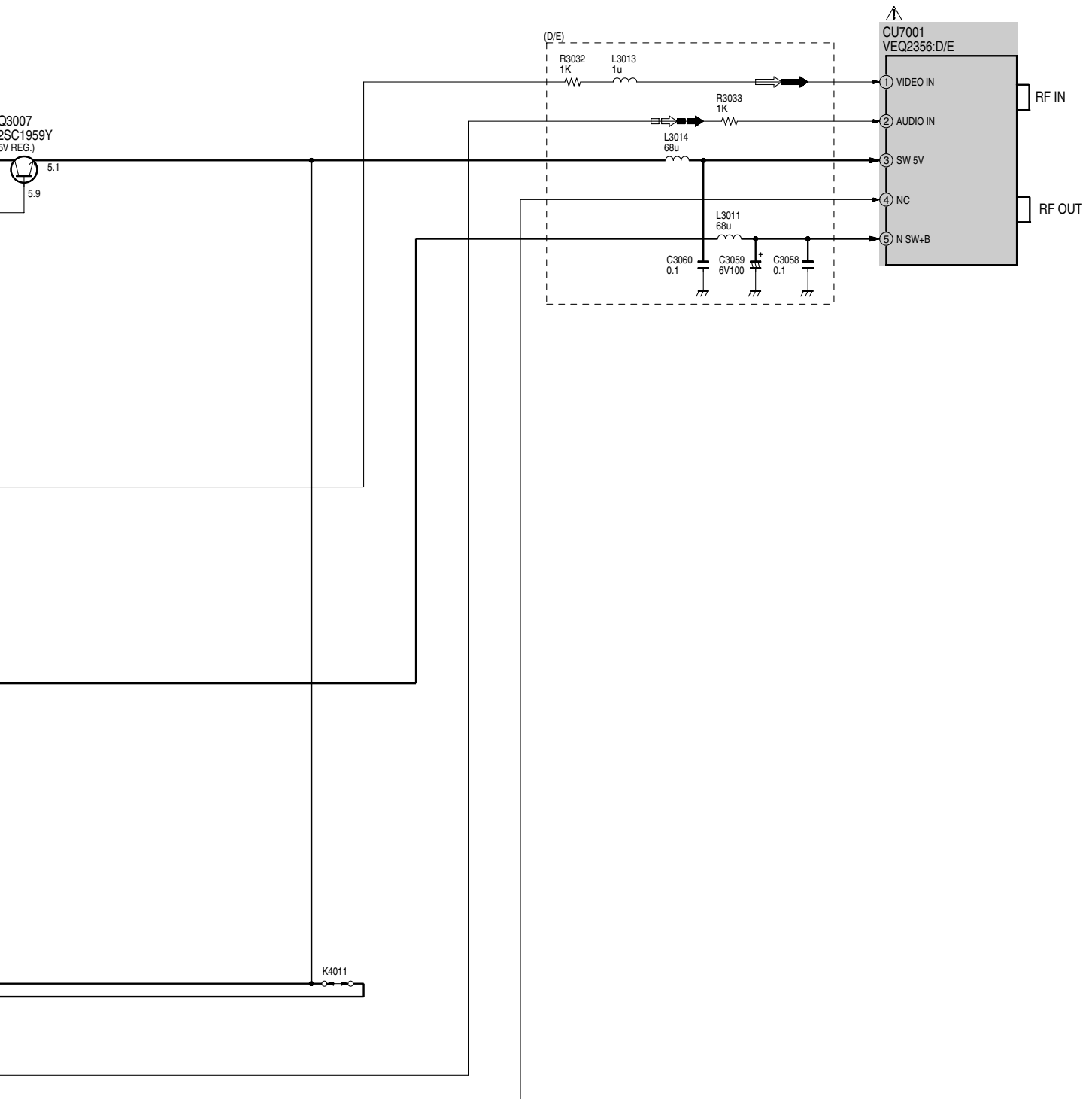
 AUDIO MAIN SIGNAL PATH IN REC MODE
 AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



8.4. POWER SUPPLY/ RF SECTION IN MAIN SCHEMATIC DIAGRAM



←■ AUDIO MAIN SIGNAL PATH IN REC MODE
 ←□ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



6

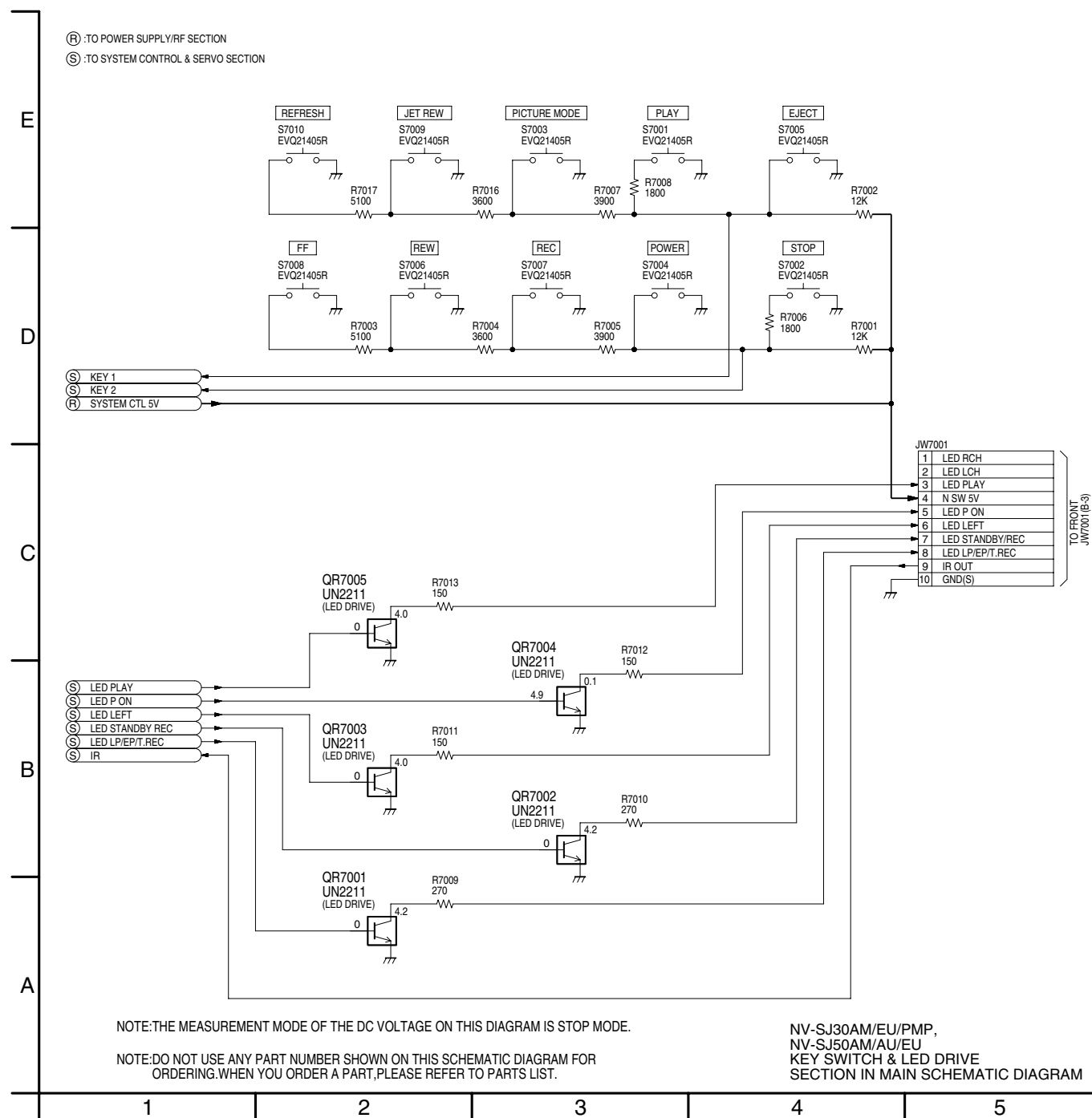
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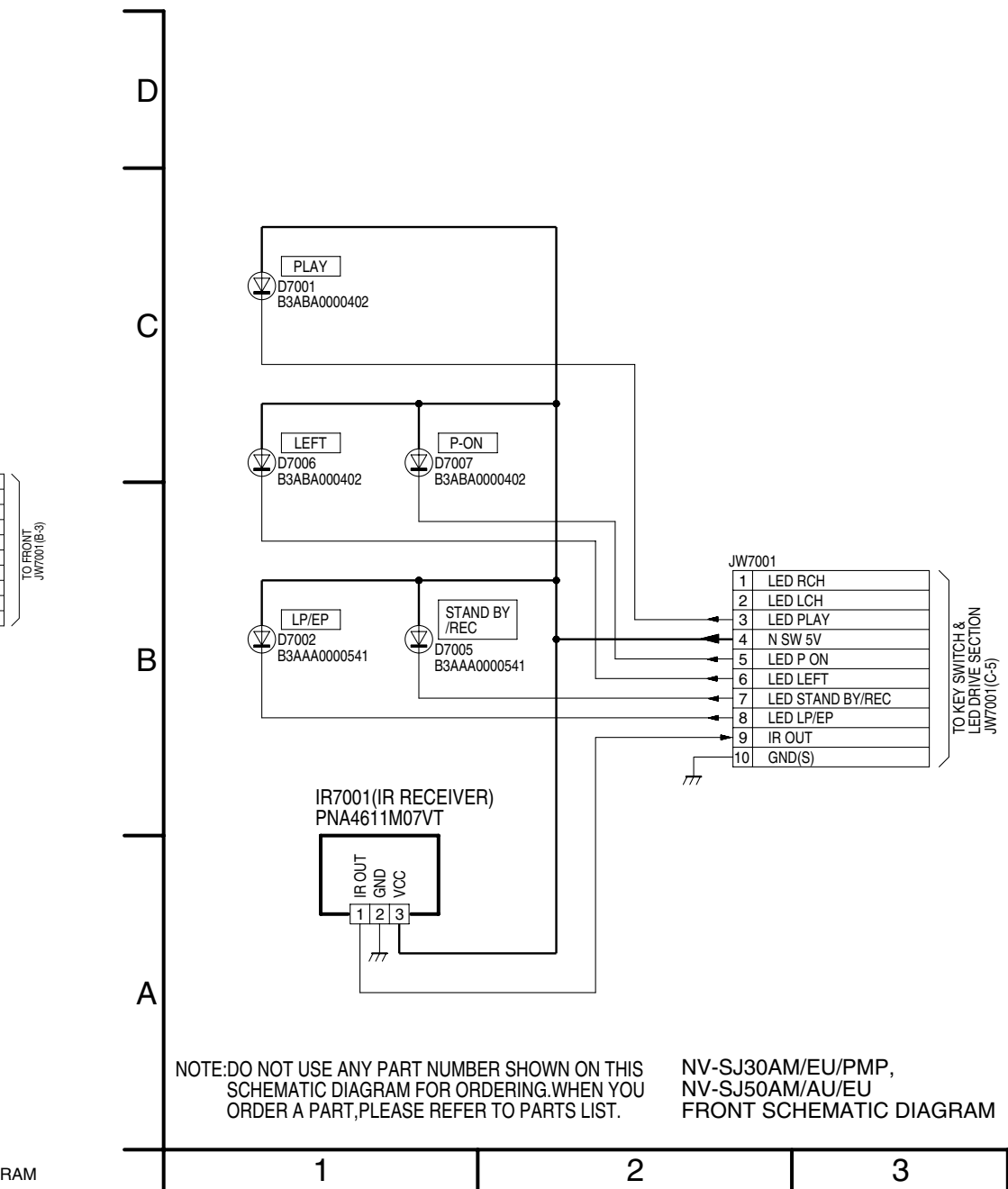
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8.5. KEY SWITCH & LED DRIVE SECTION IN MAIN SCHEMATIC DIAGRAM



AM 8.6. FRONT SCHEMATIC DIAGRAM



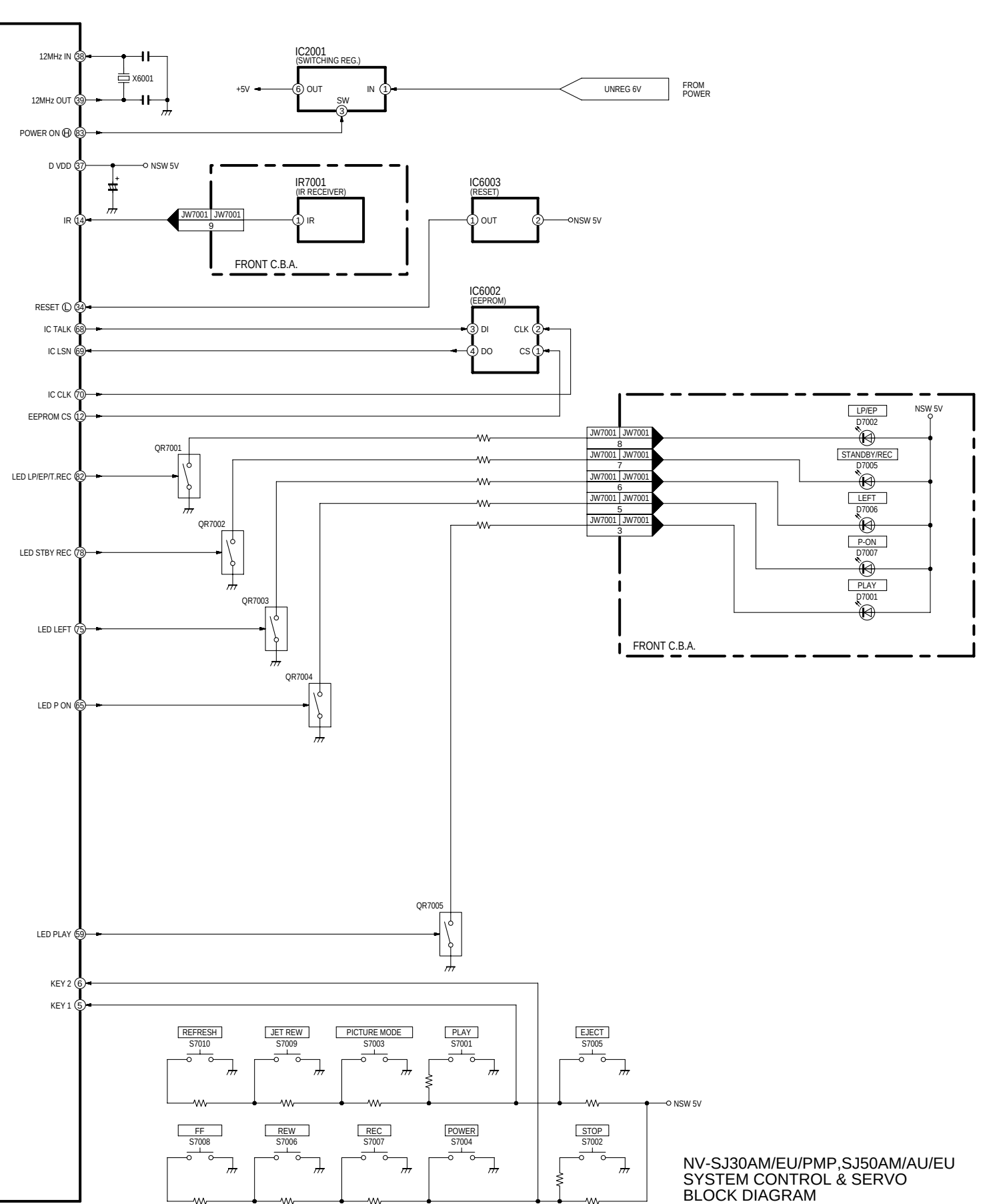
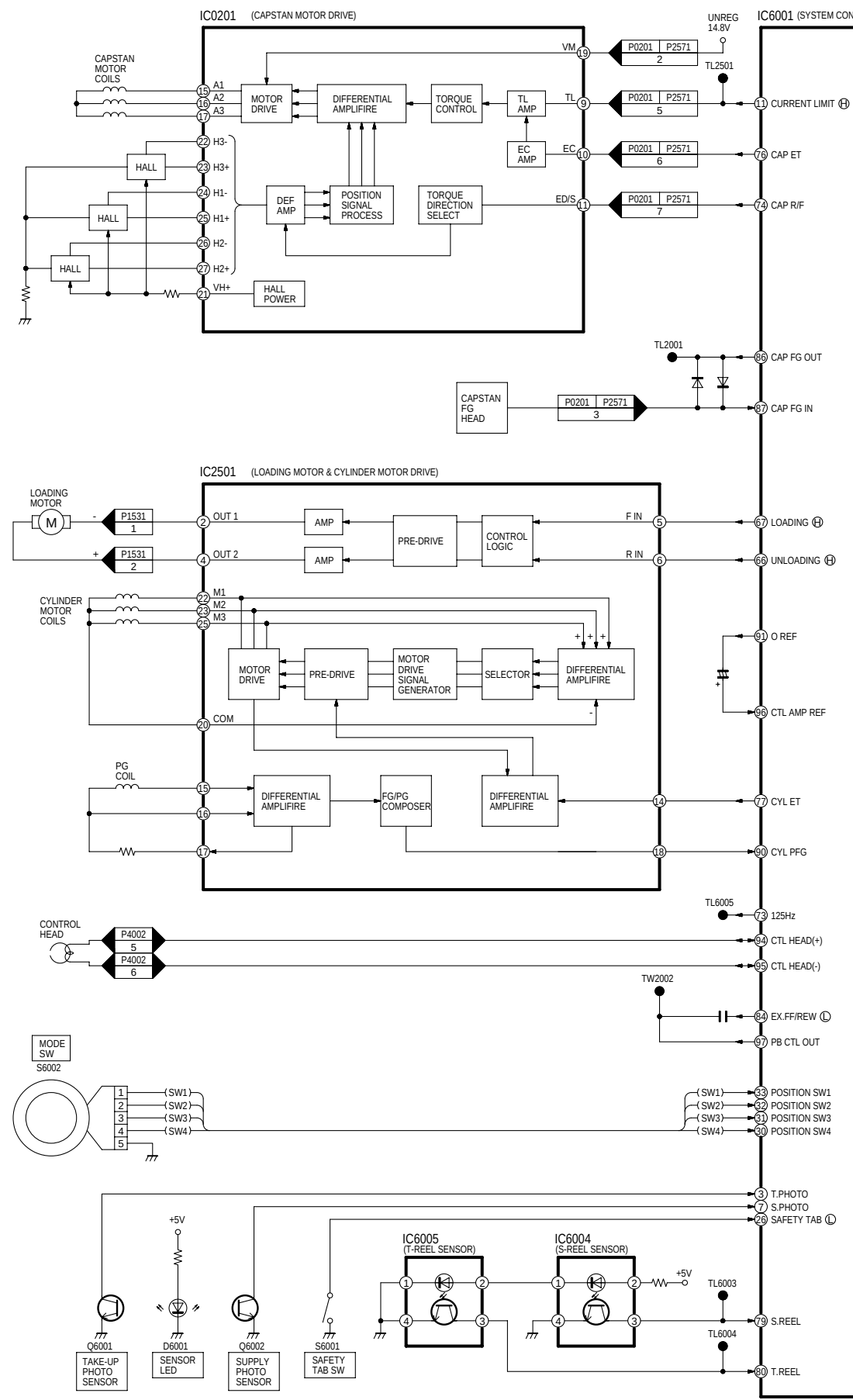
RAM

No	Terminal Name	I/O	Description	P.OFF	P.Failure	Reset/ Release
1	CODE1	I	AD input terminal for model setting.	In	In	In
2	CODE2	I	AD input terminal for model setting.	In	In	In
3	T-PHOT	I	Input terminal of the Tape Beginning sensor detection. *More than 2.6V : Black tape part. *Less than 2.4V :Trans. Tape part.	In	In	In
4	SAFETY_CYL	I	REG 12V short detection signal. It is a measure for cylinder driver over heat by short. Perform detection process at 3 seconds after that the P.ON (H) signal at Pin 4 of IC6001 has been shifted from Low to High. [Detection method] When the terminal voltage is less than 3.0V during 3 seconds continuously, the power is turned off compulsorily. * When a cassette is in, the power is turned off after a few second delay for the mechanism initial function. * Key/Remote controller input is inhibited while the compulsory power off process.	In	In	In
5	KEY1	I	AD input terminal for KEYs on the VCR.	In	In	In
6	KEY2	I	AD input terminal for KEYs on the VCR.	In	In	In
7	S-PHOT	I	Input terminal of the Tape End sensor detection. *More than 2.6V : Black tape part. *Less than 2.4V :Trans. Tape part.	In	In	In
8	NC	O	Low fix.	Low	Low	Low
9	TRACKING_ENVE	I	Input terminal of the Video envelope signal.	In	In	In
10	SQPB/SE/VHS	I	VV: VHS: 50Hz & 0~1.25V 60Hz MESCAM: 50Hz & over than 1.25V EE: VHS: 50Hz & 0~1.25V 60Hz MESCAM: 50Hz & over than 1.25V	In	In	In
11	CURRENT.LIMIT	O	Control terminal for the Capstan current limit. (Output impedance: MIN:1K, TYP:2.5K, MAX:4.0K)	In DA=0V	Low	In DA=0V
12	EEPROM_CS	O	Chip Select output terminal for EEPROM *Active High output.	Low	Low	Low
13	ART.V/H/N	O	Output terminal for the Artificial V-sync. 1. In trick playback. Artificial V sync inserting timing : High Artificial H sync inserting timing : Hi-Z (M output) Except above conditions : Low 2. Other than above conditions (Including OSD REC) : Low	Low	Low	Low
14	REMOCON	I	Input terminal for the Remote Controller.	In	In	In
15	NC	O	Low fix.	Low	Low	Low
16	NC	O	Low fix.	Low	Low	Low
17	NC	O	Low fix.	Low	Low	Low
18	VIDEO.H.SW	O	Video head switching signal *L'/R="High" *R'/L="Low"	Low	Low	Low
19	AUDIO.H.SW	O	Head switching signal for Audio circuit.	Low	Low	Low
20	D.A.REC(H)	O	Recording control signal for the Linear Audio.	Low	Low	Low
21	TAPE REFRESH (H)	O	Terminal for the signal that changes FE oscillation frequency (130KHz/70KHz) for TAPE REFRESH. *TAPE REFRESH is operating: "High" is output *Other than above condition: "Low" is output	Low	Low	Low
22	PICT1	O	Control terminal for the Picture mode.	Low	Low	Low
23	PICT2	O	Control terminal for the Picture mode.	Low	Low	Low
24	NC	O	Low fix.	Low	Low	Low
25	SP(L)	O	REC MODE DATA *N2H/P3H:"Low" *N4H/N6H/P6H/P9H:"High"	Low	Low	Low
26	STAB(L)	I	SAFETY TAB DETECTION *With SAFETY TAB: "Low" *Without SAFETY TAB:"High"	In	In	In
27	NC	O	Low fix.	Low	Low	Low
28	NTSC (L)	O	PLAYBACK MODE.....50Hz:"High", 60Hz:"Low"	Low	Low	Low

No	Terminal Name	I/O	Description	P.OFF	P.Failure	Reset/ Release																																																																	
29	AVR (L)	I/O	Simplified AI playback ON/OFF control.	Low	Low	Low																																																																	
30	POS.SW4	I	Input terminal for mechanism position. <table border="1"><thead><tr><th>SW4</th><th>SW3</th><th>SW2</th><th>SW1</th><th>Position Name</th></tr></thead><tbody><tr><td>1</td><td>1</td><td>1</td><td>0</td><td>EJECT Position</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>DOWN Position</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>R-REW Position</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>LOAD Position</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>REV Position</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>PLAY Position</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>P OFF Position</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>STOP R Position</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>STOP F Position</td></tr><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>FF/REW Position</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0</td><td>FF2 Position</td></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>Intermediate Positions between each Positions</td></tr></tbody></table>	SW4	SW3	SW2	SW1	Position Name	1	1	1	0	EJECT Position	0	0	1	0	DOWN Position	0	0	1	1	R-REW Position	0	1	0	0	LOAD Position	0	1	0	1	REV Position	0	1	1	0	PLAY Position	0	1	1	1	P OFF Position	1	0	0	0	STOP R Position	1	0	0	1	STOP F Position	1	1	0	0	FF/REW Position	1	1	1	0	FF2 Position	1	1	1	1	Intermediate Positions between each Positions	In	In	In
SW4	SW3	SW2	SW1	Position Name																																																																			
1	1	1	0	EJECT Position																																																																			
0	0	1	0	DOWN Position																																																																			
0	0	1	1	R-REW Position																																																																			
0	1	0	0	LOAD Position																																																																			
0	1	0	1	REV Position																																																																			
0	1	1	0	PLAY Position																																																																			
0	1	1	1	P OFF Position																																																																			
1	0	0	0	STOP R Position																																																																			
1	0	0	1	STOP F Position																																																																			
1	1	0	0	FF/REW Position																																																																			
1	1	1	0	FF2 Position																																																																			
1	1	1	1	Intermediate Positions between each Positions																																																																			
31	POS.SW3	I		In	In	In																																																																	
32	POS.SW2	I		In	In	In																																																																	
33	POS.SW1	I		In	In	In																																																																	
34	RESET	I	RESET Terminal.	In	In	In																																																																	
35	NC	I	Connected to the GND.	-	-	-																																																																	
36	NC	I	Popen.	-	-	-																																																																	
37	5V(D)	-	VCC (5V) for Digital port	-	-	-																																																																	
38	12MHz.IN	I	Main clock (12MHz) osc. input terminal.	In	In	In																																																																	
39	12MHz.OUT	O	Main clock (12MHz) osc. output terminal.	Out	Out	Out																																																																	
40	GND(OSC)	-	Digital GND for OSC circuit.	-	-	-																																																																	
41	PAL PB (L)	O	3.58NTSC: "High" is output Other than above: "Low" is output	Low	Low	Low																																																																	
42	FM_MUTE	O	Audio mute control terminal. High output (AUDIO MUTE). The voltage is shifted to Hi-Z for reucing the current at 3 second after the power has been turned on .	Hi-Z	In	In																																																																	
43	32M.START(H)	I	Clock souce selection terminal at reset starting. *12/16MHz(High speed) :Connected to VCC (5V). *32KHz(Slow speed) :Connected to Vss (0V).	In	In	In																																																																	
44	LC.OSC.IN	I	Input terminal of the LC Oscillation.	In	In	In																																																																	
45	LC.OSC.OUT	O	Output terminal of the LC Oscillation.	Out	Out	Out																																																																	
46	GND	-	Connected to the GND (Test terminal "B" in the factory).	-	-	-																																																																	
47	FSC.LPF	I	OSC Filter connection terminal for Internal sync generator.	In	Low	In																																																																	
48	FSC.IN	I	Sub carrier (fsc) input terminal for sync generator.	In	Low	In																																																																	
49	GND(OSD)	-	GND terminal for OSD circuit.	-	-	-																																																																	
50	CVIN	I	Input terminal for composite video signal.	In	In	In																																																																	
51	KILLER	I	When a signal that V-sync is 50Hz being input or playing back. * PAL/MESECAM distinction result input terminal. Low is put into this terminal: PAL High is input to this terminal: Depending on SQPB/MESECAM/VHS input terminal. When a NTSC signal is input. * Input terminal for distinction result of agreement between Fsc of input signal and frequency of OSC for sub-carrier that being chosen by IC3001. Low is input: Agree High is input: Different	In	In	In																																																																	
52	CVOUT	O	Output terminal for the composite video signal.	Out	Out	Out																																																																	
53	5V(OSD)	-	Power supply terminal for OSD	-	-	-																																																																	
54	HLF	I	LPF connection terminal for slicer./Timing generation terminal by H-sync in SUPERIMPOSE.	In	In	In																																																																	
55	SECAM MIX	I	SECAM CHROMA signal input terminal for SECAM SIGNAL SUPERIMPOSE.	Low	Low	Low																																																																	
56	CVIN(EDS)	I	Composite video signal input terminal for the slicer.	In	In	In																																																																	
57	GND	-	Connect to the GND (Test terminal "A" in the factory).	-	-	-																																																																	
58	LED Rch OUT	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low																																																																	
59	LED PLAY OUT	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low																																																																	

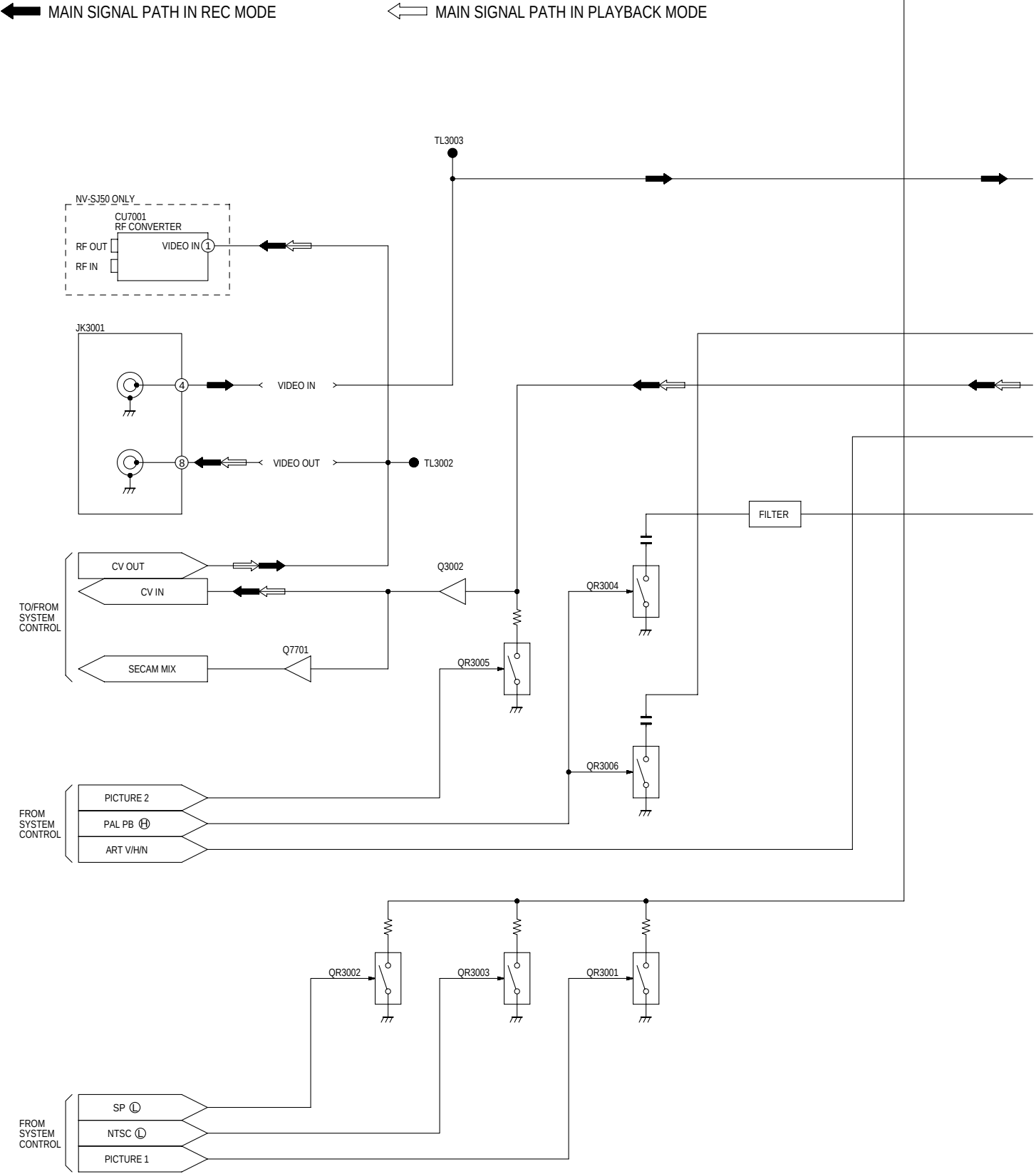
No	Terminal Name	I/O	Description	P.OFF	P.Failure	Reset/ Release
60	VCR/TV NV-SJ50)	O	TV/VTR output selection control signal * P.OFF, Shifting to T,Standby: "Low" output. * Shifting to VV from EE: "High" output. * The condition is inverted whenever the TV/VCR Key is received.	Low	Low	Low
	NC	O	Low fix.	Low	Low	Low
61	PAL 9H	O	PAL 9H: High is output.	Low	Low	Low
62	NC	O	Low fix.	Low	Low	Low
63	LED_Lch_OUT	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low
64	NC	O	Low fix.	Low	Low	Low
65	LED_P_ON	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low
66	UNLOADING(H)	O	Control terminal for the Unloading operation.	Low	Low	Low
67	LOADING(H)	O	Control terminal for the loading operation.	Low	Low	Low
68	IC.DATA.OUT	O	Timer-Bus signal for peripheral ICs control: Data output	(Normal ope.)	In	Hi-Z
69	IC.DATA.IN	I	Timer-Bus signal for peripheral ICs control: Data input	(Normal ope.)	In	In
70	IC.DATA.CLK	O	Timer-Bus signal for peripheral ICs control:Clock outout	(Normal ope.)	In	Hi-Z
71	IIC.CLK	O	Serial communication terminal (IIC) for IC3001/FM audio IC.	(Normal ope.)	In	Hi-Z
72	IIC.DATA	I/O	Serial communication terminal (IIC) for IC3001/FM audio IC.	(Normal ope.)	In	Hi-Z
73	125Hz/ROM.CORE	O	ROM Correction confirmation mode: * ROM correction setting bit is "ON": "High". * ROM correction setting bit is "OFF": "Low" is existed. (Other than ROM Correction confirmation mode, this terminal is the output terminal of internal clock for main clock adjustment.:Outputting the 125Hz.)	(Normal ope.)	Low	(Normal ope.)
74	CAP R/F	O	The rotation direction control terminal of the capstan driver. *RVS="High" *FWD="Low".	Low	Low	Low
75	LED_LEFT	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low
76	CAP.ET	O	Power supply terminal for the capstan motor control. (Compared with the driver reference voltage, when it is "low", current will be cut. Also when it is "high", the rotation speed will be accelerated.)	High PWM=0V	Low	High PWM=0V
77	CYL.ET	O	Power supply terminal of the cylinder motor control: (Compared with the driver reference voltage, when it is "high", current will be cut. Also when it is "low", the rotation speed will be accelerated. (Max:2.8V))	Low PWM=2.800V	Low	Low PWM=2.800V
78	LED_STBY_REC	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low
79	S.REEL.PULSE	I	Input terminal of the S.Reel pulse.	In	In	In
80	T.REEL.PULSE	I	Input terminal of the T.Reel pulse.	In	In	In
81	BIAS(L)	O	Linear Audio REC/ERASE ON/OFF control terminal. (FULL ERASE ON/OFF control is combined with) *When recording the linear audio, the "Low" is output synchronizing with D.REC signal for IC3001. Output mode: REC(ADUB/AV-INSERT) *When the recording starts, "Low" is output at 140-160m sec. after D.REC (H) for IC3001 has been shifted to "High" from "Low". *When the recording stops, the "High" is output at 0-20m sec. after D.REC for IC3001 has being shifted to "low" from "High".	In	In	In
82	LED_LP/EP	O	LED ON/OFF control terminal. "High": ON "Low": OFF	Normal Operation	Low	Low
83	P.ON (H)	O	Terminal for Power ON/OFF control. POWER is ON: "High" * During Mechanism Initial Operation: "High". * After Mechanism Initial Opeation: "Low".	Low	Low	High

No	Terminal Name	I/O	Description	P.OFF	P.Failure	Reset/ Release										
84	EX.FF/REW (L)	O	Control signal filter select terminal in FF/REW mode. *During FF/REW: Hi-Z *Except FF/REW: Low VR MODE POSITION PNO STOP FF/REW STOP STOP FF/REW STOP PLAY 00 21 00 26 27 28 00 EX.FF/REW(L) VTR MODE Hi-Z Low Hi-Z *Refer to FF/REW (Hi-z) output timing of the Z-mechanism regarding to control spec. of this terminal. *When the unit becomes into FF/REW mode , the input is set. *In STOP mode, the setting is released after shift to STOP3 for control of STOP. However, if the CTL amp gain is 5 (=60dB) or 7 (=70dB) when starting of FF/REW, Low is output compulsorily automatically.	Low	Low	Low										
85	GND	I	Low fix.	In	In	In										
86	FG.AMP.OUT	O	Output terminal for the Capstan FG AMP signal.	Out	Out	Out										
87	FG.AMP.IN	I	Input terminal for the Capstan FG AMP signal.	In	In	In										
88	GND(A)	-	GND for Analogue circuit.	-	-	-										
89	NC	O	Low fix.	Low	Low	Low										
90	CYL.PFG	I	Input terminal for the Cylinder PG/FG.	In	In	In										
91	OREF	O	1/2 VDD reference voltage output terminal for the Analogue AMP.	Out	Out	Out										
92	IREF	I	1/2 VDD reference voltage input terminal for the Analogue AMP.	In	In	In										
93	GND	I	GND	In	In	In										
94	CTL.HEAD(-)	I/O	I/O terminal for the Control head (-)	In/Out	In/Out	In/Out										
95	CTL.HEAD(+)	I/O	I/O terminal for the Control head (+)	In/Out	In/Out	In/Out										
96	CTL.AMP.REF	I	Capacitor connection terminal for reference of the control AMP.	In	In	In										
97	PB.CTL.OUT	O	Output terminal for the Control AMP.	Out	Out	Out										
98	5V(A)	-	Power supply terminal for Analogue AMP.	-	-	-										
99	5V(AD)	-	Reference power supply terminal for the AD/8bit DA	-	-	-										
100	NORM/SERV/T2/TEST	O	Factory mode/ Service mode setting terminal. <table><tr><td>Input Voltage</td><td>Mode</td></tr><tr><td>Over 4.0V</td><td>Normal</td></tr><tr><td>Over 2.0V and less than 4.0V</td><td>Service</td></tr><tr><td>Over 1.0V and less than 2.5V</td><td>Test 2</td></tr><tr><td>Less than 1.0V</td><td>Test 1</td></tr></table>	Input Voltage	Mode	Over 4.0V	Normal	Over 2.0V and less than 4.0V	Service	Over 1.0V and less than 2.5V	Test 2	Less than 1.0V	Test 1	In	In	In
Input Voltage	Mode															
Over 4.0V	Normal															
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Less than 1.0V	Test 1															

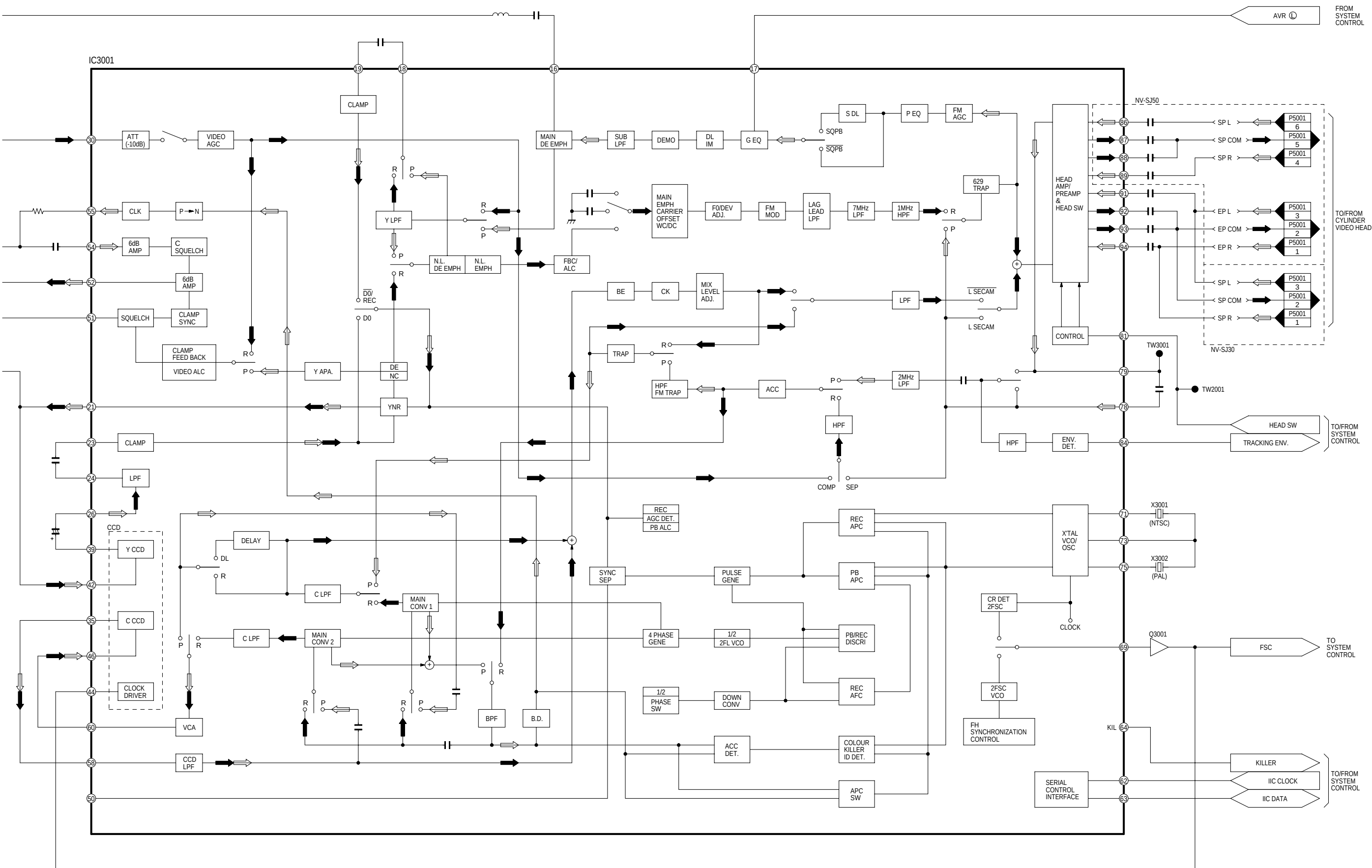


← MAIN SIGNAL PATH IN REC MODE

⇐ MAIN SIGNAL PATH IN PLAYBACK MODE



NV-SJ30AM/EU/PMP, SJ50AM/AU/EU
LUMINANCE & CHROMINANCE BLOCK DIAGRAM



NV-SJ30AM/EU/PMP, SJ50AM/AU/EU
LUMINANCE & CHROMINANCE BLOCK DIAGRAM

NV-SJ30AM/EU/PMP, SJ50AM/AU/EU
LUMINANCE & CHROMINANCE BLOCK DIAGRAM